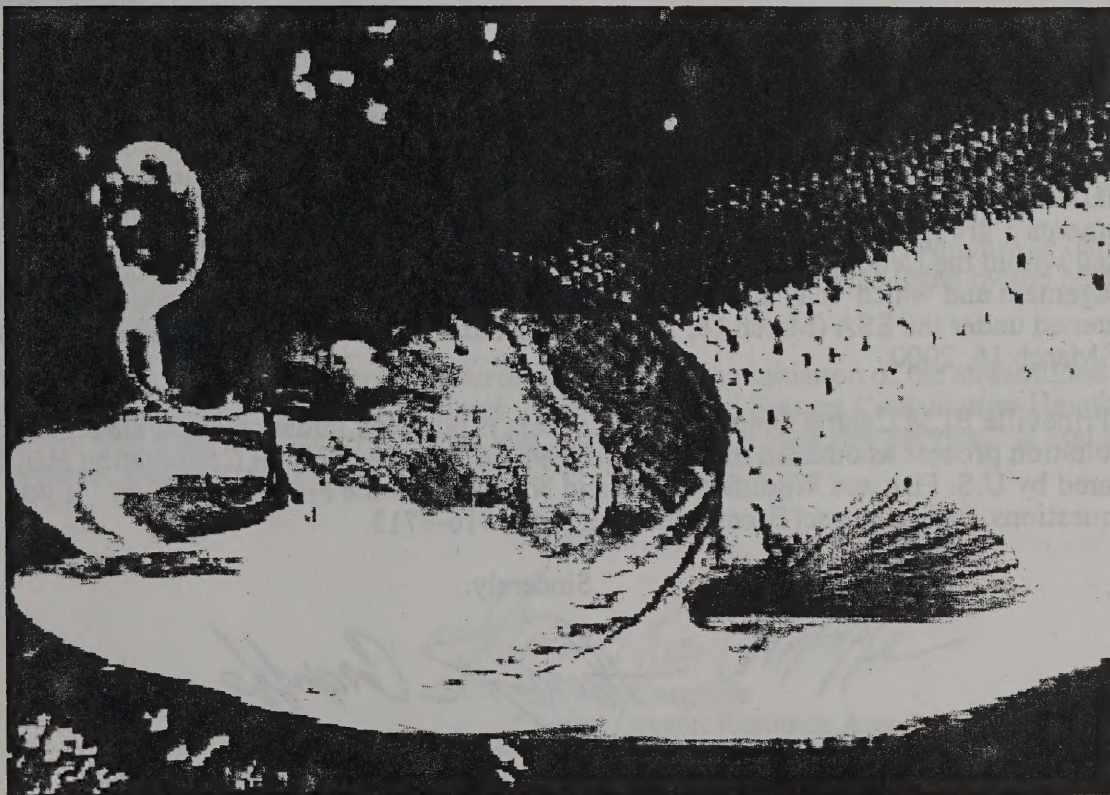


Final Biological Assessment for Steelhead Trout and its Habitat in the John Day River Basin

**Submitted To:
National Marine Fisheries Service
Portland Oregon**

June 2000



**Submitted by: Bureau of Land Management,
Prineville District
Central Oregon Resource Area**

For: Ongoing and Proposed Actions in 2000

**BLM Library
Denver Federal Center
Bldg. 50, OC-521
P.O. Box 25047
Denver, CO 80225**



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Prineville District Office
P.O. Box 550 (3050 N.E. 3rd Street)
Prineville, Oregon 97754

IN REPLY REFER TO:
6840P

Doug Young
U.S. Fish and Wildlife Service
Bend Field Office
20300 Empire Ave. Suite B3
Bend, OR 97701

Dear Mr. Young:

Per regulations on interagency cooperation (50 CFR 402) pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 (as amended), this letter and the enclosed Draft Biological Assessment (BA) constitute a request to the National Marine Fisheries Service for formal consultation and Level 1 team streamlining process initiation. The enclosed BA documents 3 groups of proposed actions: range allotments, and prescribed burning. Which are located within the Central Oregon Resource Area, Prineville District Bureau of Land Management and which 'may affect' Mid Columbia summer steelhead ESU, which was listed as threatened under the ESA (March 16, 1999) and includes critical habitat as listed by the NMFS as of March 16, 2000.

The Prineville BLM Central Oregon Resource Area is pursuing initiation of the streamlined consultation process as outlined in the March 1998 Endangered Species Consultation Handbook, prepared by U.S. Fish and Wildlife Service and National Marine Fisheries Service. If you have any questions, please contact Brent Ralston at (541) 416-6713.

Sincerely,

Harry R. Cosgriffe
Central Oregon Resource Area Manager

BLM Library
Donner Federal Center
Bldg 50, OC-221
P.O. Box 25047



IN REPLY REFER TO:
6840P

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Prineville District Office
P.O. Box 550 (3050 N.E. 3rd Street)
Prineville, Oregon 97754

Diana Hwang
U.S. Fish and Wildlife Service
2600 SE 98th Ave. Suite 100
Portland, OR 97266

Dear Ms. Hwang:

Per regulations on interagency cooperation (50 CFR 402) pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 (as amended), this letter and the enclosed Draft Biological Assessment (BA) constitute a request to the National Marine Fisheries Service for formal consultation and Level 1 team streamlining process initiation. The enclosed BA documents 3 groups of proposed actions: range allotments, and prescribed burning. Which are located within the Central Oregon Resource Area, Prineville District Bureau of Land Management and which 'may affect' Mid Columbia summer steelhead ESU, which was listed as threatened under the ESA (March 16, 1999) and includes critical habitat as listed by the NMFS as of March 16, 2000.

The Prineville BLM Central Oregon Resource Area is pursuing initiation of the streamlined consultation process as outlined in the March 1998 Endangered Species Consultation Handbook, prepared by U.S. Fish and Wildlife Service and National Marine Fisheries Service. If you have any questions, please contact Brent Ralston at (541) 416-6713.

Sincerely,

Harry R. Cosgriffe
Central Oregon Resource Area Manager



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Prineville District Office
P.O. Box 550 (3050 N.E. 3rd Street)
Prineville, Oregon 97754

IN REPLY REFER TO:
6840P

Mike Crouse
Attn: Ron Lindland
National Marine Fisheries Service
Environmental and Technical Services Division
525 NE Oregon St., Suite 500
Portland, OR 97232-2737

Dear Mr. Crouse:

Per regulations on interagency cooperation (50 CFR 402) pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 (as amended), this letter and the enclosed Draft Biological Assessment (BA) constitute a request to the National Marine Fisheries Service for formal consultation and Level 1 team streamlining process initiation. The enclosed BA documents 3 groups of proposed actions: range allotments, and prescribed burning. Which are located within the Central Oregon Resource Area, Prineville District Bureau of Land Management and which 'may affect' Mid Columbia summer steelhead ESU, which was listed as threatened under the ESA (March 16, 1999) and includes critical habitat as listed by the NMFS as of March 16, 2000.

The Prineville BLM Central Oregon Resource Area is pursuing initiation of the streamlined consultation process as outlined in the March 1998 Endangered Species Consultation Handbook, prepared by U.S. Fish and Wildlife Service and National Marine Fisheries Service. If you have any questions, please contact Brent Ralston at (541) 416-6713.

Sincerely,

Harry R. Cosgriffe
Central Oregon Resource Area Manager



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Prineville District Office
P.O. Box 550 (3050 N.E. 3rd Street)
Prineville, Oregon 97754



IN REPLY REFER TO:
6840P

Theodore Meyers
Attn: Scott Leonard
National Marine Fisheries Service
1387 S. Vinnell Way, Suite 377
Boise, ID 83709

Dear Mr. Meyers:

Per regulations on interagency cooperation (50 CFR 402) pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 (as amended), this letter and the enclosed Draft Biological Assessment (BA) constitute a request to the National Marine Fisheries Service for formal consultation and Level 1 team streamlining process initiation. The enclosed BA documents 3 groups of proposed actions: range allotments, and prescribed burning. Which are located within the Central Oregon Resource Area, Prineville District Bureau of Land Management and which 'may affect' Mid Columbia summer steelhead ESU, which was listed as threatened under the ESA (March 16, 1999) and includes critical habitat as listed by the NMFS as of March 16, 2000.

The Prineville BLM Central Oregon Resource Area is pursuing initiation of the streamlined consultation process as outlined in the March 1998 Endangered Species Consultation Handbook, prepared by U.S. Fish and Wildlife Service and National Marine Fisheries Service. If you have any questions, please contact Brent Ralston at (541) 416-6713.

Sincerely,

Harry R. Cosgriffe
Central Oregon Resource Area Manager



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Prineville District Office

P.O. Box 550 (3050 N.E. 3rd Street)

Prineville, Oregon 97754

IN REPLY REFER TO:

6840P

Diana Hwang
U.S. Fish and Wildlife Service
2600 SE 98th Ave. Suite 100
Portland, OR 97266

Dear Ms. Hwang:

Per regulations on interagency cooperation (50 CFR 402) pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 (as amended), this letter and the enclosed Draft Biological Assessment (BA) constitute a request to the National Marine Fisheries Service for formal consultation and Level 1 team streamlining process initiation. The enclosed BA documents 3 groups of proposed actions: range allotments, prescribed burning, and actions included in the John Day River Management Plan. Which are located within the Central Oregon Resource Area, Prineville District Bureau of Land Management and which ?may affect? Mid Columbia summer steelhead ESU, which was listed as threatened under the ESA (March 16, 1999) and includes critical habitat as listed by the NMFS as of March 16, 2000.

The Prineville BLM Central Oregon Resource Area is pursuing initiation of the streamlined consultation process as outlined in the March 1998 Endangered Species Consultation Handbook, prepared by U.S. Fish and Wildlife Service and National Marine Fisheries Service. If you have any questions, please contact Brent Ralston at (541) 416-6713.

Sincerely,

Harry R. Cosgriffe
Area Manager, Central Oregon Resource Area



IN REPLY TO:

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Prineville District Office
P.O. Box 550 (3050 N.E. 3rd Street)
Prineville, Oregon 97754

Doug Young
U.S. Fish and Wildlife Service
Bend Field Office
20300 Empire Ave. Suite B3
Bend, OR 97701

Dear Mr. Young:

Per regulations on interagency cooperation (50 CFR 402) pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 (as amended), this letter and the enclosed Draft Biological Assessment (BA) constitute a request to the National Marine Fisheries Service for formal consultation and Level 1 team streamlining process initiation. The enclosed BA documents 3 groups of proposed actions: range allotments, prescribed burning, and actions included in the John Day River Management Plan. Which are located within the Central Oregon Resource Area, Prineville District Bureau of Land Management and which may affect? Mid Columbia summer steelhead ESU, which was listed as threatened under the ESA (March 16, 1999) and includes critical habitat as listed by the NMFS as of March 16, 2000.

The Prineville BLM Central Oregon Resource Area is pursuing initiation of the streamlined consultation process as outlined in the March 1998 Endangered Species Consultation Handbook, prepared by U.S. Fish and Wildlife Service and National Marine Fisheries Service. If you have any questions, please contact Brent Ralston at (541) 416-6713.

Sincerely,

Harry R. Cosgriffe
Area Manager, Central Oregon Resource Area



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Prineville District Office

P.O. Box 550 (3050 N.E. 3rd Street)

Prineville, Oregon 97754

IN REPLY REFER TO:

6840P

Theodore Meyers
Attn: Scott Leonard
National Marine Fisheries Service
1387 S. Vinnell Way, Suite 377
Boise, ID 83709

Dear Mr. Meyers:

Per regulations on interagency cooperation (50 CFR 402) pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 (as amended), this letter and the enclosed Draft Biological Assessment (BA) constitute a request to the National Marine Fisheries Service for formal consultation and Level 1 team streamlining process initiation. The enclosed BA documents 3 groups of proposed actions: range allotments, prescribed burning, and actions included in the John Day River Management Plan. Which are located within the Central Oregon Resource Area, Prineville District Bureau of Land Management and which ?may affect? Mid Columbia summer steelhead ESU, which was listed as threatened under the ESA (March 16, 1999) and includes critical habitat as listed by the NMFS as of March 16, 2000.

The Prineville BLM Central Oregon Resource Area is pursuing initiation of the streamlined consultation process as outlined in the March 1998 Endangered Species Consultation Handbook, prepared by U.S. Fish and Wildlife Service and National Marine Fisheries Service. If you have any questions, please contact Brent Ralston at (541) 416-6713.

Sincerely,

Harry R. Cosgriffe
Area Manager, Central Oregon Resource Area



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Prineville District Office

P.O. Box 550 (3050 N.E. 3rd Street)

Prineville, Oregon 97754

IN REPLY REFER TO:

6840P

Rick Applegate
Attn: Ron Lindland
National Marine Fisheries Service
Environmental and Technical Services Division
525 NE Oregon St., Suite 500
Portland, OR 97232-2737

Dear Mr. Applegate:

Per regulations on interagency cooperation (50 CFR 402) pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 (as amended), this letter and the enclosed Draft Biological Assessment (BA) constitute a request to the National Marine Fisheries Service for formal consultation and Level 1 team streamlining process initiation. The enclosed BA documents 3 groups of proposed actions: range allotments, prescribed burning, and actions included in the John Day River Management Plan. Which are located within the Central Oregon Resource Area, Prineville District Bureau of Land Management and which may affect Mid Columbia summer steelhead ESU, which was listed as threatened under the ESA (March 16, 1999) and includes critical habitat as listed by the NMFS as of March 16, 2000.

The Prineville BLM Central Oregon Resource Area is pursuing initiation of the streamlined consultation process as outlined in the March 1998 Endangered Species Consultation Handbook, prepared by U.S. Fish and Wildlife Service and National Marine Fisheries Service. If you have any questions, please contact Brent Ralston at (541) 416-6713.

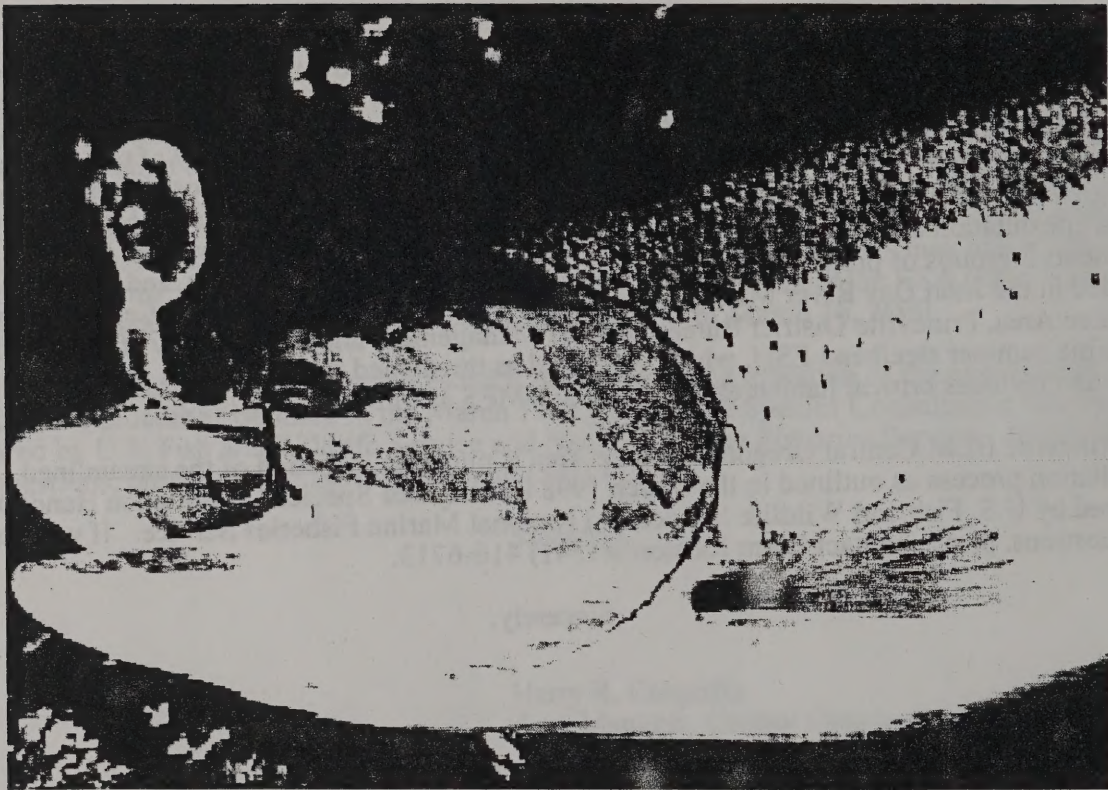
Sincerely,

Harry R. Cosgriffe
Area Manager, Central Oregon Resource Area

Final Biological Assessment for Steelhead Trout and its Habitat in the John Day River Basin

**Submitted To:
National Marine Fisheries Service
Portland Oregon**

June 2000



**Submitted by: Bureau of Land Management,
Prineville District
Central Oregon Resource Area**

For: Ongoing and Proposed Actions in 2000

Table of Contents

Chapter A Identification of listed and proposed critical habitat affected by actions in the Section 7 watersheds.

Chapter B Fisheries Information and Watershed Baseline Conditions

Page 1	General Information
Page 2	Life History and Population Characteristics
Page 8	Natural Production Constraints
Page 11	General Baseline conditions for John Day river Basin #170702
Page 12	Baseline Conditions for the Upper John Day River Subbasin #17070201
Page 24	Baseline Conditions for the North Fork John Day River Subbasin #17070202
Page 30	Baseline Conditions for the Middle Fork John Day River Subbasin #17070203
Page 33	Baseline Conditions for the Lower John Day River Subbasin #17070204

Chapter C Ongoing, Proposed, and Interrelated and Interdependent Federal Actions

Page 1	Summary of Proposed Actions
--------	-----------------------------

Chapter D Description of Recent and Future Monitoring

Chapter E Analysis of Effects

Page 1	Range Allotments (Background Information, Management Goals and Objectives)
Page 4	Direct and Indirect Grazing Impacts
Page 6	Allotment Specific Analysis
Page 6	Upper John Day Range Allotments
Page 27	North Fork John Day Range Allotments
Page 39	Middle Fork John Day Range Allotments
Page 45	Lower John Day Range Allotments
Page 60	Unauthorized Grazing
Page 61	Prescribed Burning
Page 66	John Day River Management Plan

Chapter F Combined Effects

Page 1	Combined Effects of Prineville District BLM actions in the John Day Basin
--------	---

List of References

Appendix A Maps

Appendix B List of "May Affect" Grazing Allotments

Appendix C Specific Descriptions of "May Affect" Grazing Allotments

Appendix D Redd Trampling Analysis

Appendix E Unauthorized Grazing Regulations

A. Identification of listed and proposed critical habitat affected by actions in the section 7 watershed.

Summer Steelhead

The Middle Columbia River Evolutionary Significant Unit (ESU) of inland steelhead (*Onchorynchus mykiss*) is currently classified as threatened by the National Marine Fisheries Service (NMFS)(FR Vol. 64, No. 57, 1999). NMFS determined that there are 2 out of 15 ESU's for steelhead that warrant listing (Middle Columbia and Upper Willamette River ESU's). Steelhead inhabiting the John Day River Basin within the Central Oregon Resource Area of the Prineville District Bureau of Land Management (BLM), are in the Middle Columbia ESU.

The inland steelhead ESU occupies the Columbia River Basin and tributaries upstream and excluding the Wind River in Washington and the Hood River in Oregon, to and including, the Yakima River in Washington.

In the John Day River basin, steelhead spawning occurs widely throughout the basin, primarily within tributary streams to the upper main river and its forks. See Appendix A - Maps 1 and 2 (John Day Basin Land Ownership Patterns and John Day Basin Steelhead Habitat Types respectively) for a depiction of occupied steelhead habitat in relation to BLM-managed lands. The John Day River Basin contains approximately 1,800 miles of usable spawning/rearing habitat for steelhead trout, and the basin contains one of last remaining totally wild populations of steelhead trout in the Columbia River Basin. The John Day steelhead population has not been supplemented with hatchery fish.

Scope

The John Day Basin encompasses about 5.1 million acres of an extensive interior plateau between the Cascade Range and the Blue Mountains in northeast-central Oregon. Most of the basin is privately owned (3.2 million acres). National Forest lands encompass about 1.53 million acres, and about 332,300 acres (about 7 percent) are managed by the BLM. Oregon Department of Fish and Wildlife (ODFW), National Park Service, Oregon State Land Board, Oregon Forestry Department, and the Corps of Engineers manage about 57,000 acres. (See Appendix A - Map 1 for a map of the BLM Lands). Predominate management activities in this watershed are agriculture, grazing, timber, and recreation.

Within the John Day Basin are four 4th field Hydrologic Units (HU) or subbasins:

- Lower John Day #17070204
- Upper John Day #17070201
- North Fork John Day #17070202
- Middle Fork John Day #17070203

Table 1 shows total acres, and Prineville District BLM managed lands within each 4th field Hydrologic Unit.

Table 1. Subbasins in the John Day Basin.

Subbasin Name	Total Acres	Prineville District BLM Managed Acres
Lower John Day	2,011,000	242,618
Upper John Day	1,375,000	145,630
North Fork John Day	1,187,000	35,350
Middle Fork John Day	504,500	3,975

Due to the unique history of public lands and the origination of the BLM as a land management agency, public land ownership patterns in the John Day Basin are often scattered and irregularly shaped. During the 19th Century the United States Government, through the General Lands Office (GLO) initiated and encouraged land disposals or give-a-ways to raise funds to support government functions and encourage settlement of the west. Programs such as the Homestead Act of 1862, Railroad Land Grants beginning in 1850, the Timber Culture Law of 1873, the Desert Land Law of 1877, the Timber and Stone Law of 1878, The Carey Land Act of 1894, the Reclamation Law of 1902, and the Stockraising Homestead Law of 1916, all led toward the fragmentation of public lands. Early settlers claimed the most favorable parcels - those adjacent to water and suitable for cultivation and/or other agricultural development. As demand grew, more marginal lands became settled. Many of the land disposal laws required settlers to 'improve' the land in some way (i.e., produce a crop, remove timber, or irrigate lands). Due to natural conditions of the ecosystem where these lands were located and variations in weather (i.e. drought) many of these lands were not 'improved' according to the stipulation of the law and ownership reverted back to the GLO. This subsequent disposal and reacquisition of scattered lands further fragmented the public lands. This land pattern carried through as the GLO became the BLM. This land pattern creates challenges in managing sensitive resources when public lands are surrounded by large expanses of private lands. Management of more scattered often less desirable, less productive tracts is constrained by resource concerns and access issues. Somewhat blocked and consolidated public lands lead to more opportunities and flexibility in management. The Prineville District has for many years carried out programs aimed at consolidating public lands. In the John Day Basin these consolidated areas are located along the lower John Day River corridor below Clarno (RM109-129), the Sutton Mountain area near Mitchell, Oregon, uplands west of Rudio Mountain, (RM185-207), and the South Fork of the John Day watershed (RM9-36) between the Ochoco and Malheur National Forests. In addition a project known as the NorthEast Oregon Assembled Land Exchange is in process and seeks to consolidate public lands along the North Fork of the John Day River and in the Rudio Mountain Area.

B. Fisheries Information and Watershed Baseline Conditions

Summer Steelhead

General Information

All steelhead in the Columbia River Basin upstream from The Dalles Dam are summer-run, inland steelhead (Schreck et al., 1986; Reisenbichler et al., 1992; Chapman et al., 1994). Steelhead in Fifteen Mile Creek, OR., are genetically allied with inland *O. mykiss*, but are winter-run. Winter steelhead are also found in the Klickitat and White Salmon Rivers, WA.

Life history information for steelhead of this ESU indicates that most middle Columbia River steelhead smolt at 2 years and spend one, two, or rarely, three years in the ocean (i.e., 1-salt, 2-salt, or 3-salt fish, respectively) prior to re-entering fresh water, where they remain up to a year prior to spawning (Howel et al., 1985; Collette et al., 1992).

Summer steelhead occur throughout the John Day Basin where habitat conditions are suitable, and accessible. Variable constraints on habitat accessibility do occur due to naturally present conditions which determine water flow in tributary streams. Yearly variations in precipitation can affect streamflows especially in the Lower John Day area. Low streamflows in this area can limit steelhead access due to not enough water flowing overland in tributary streams especially at the mouth to allow a continuous aquatic habitat for steelhead to migrate through, and thus cut off any spawning or rearing habitat within that tributary from production. This has occurred periodically within the basin, most recently in 1994 and 1999.

In the early 1960's, fishery managers released about 500,000 hatchery winter steelhead fry and limited numbers of pre-smolts used for experimental purposes. Few likely survived due to the use of improper stocks and high hauling mortality. No production releases of hatchery steelhead smolts were ever made in the John Day Subbasin. Hatchery releases for any purpose ceased in 1966 in favor of wild stocks. Today, the John Day steelhead run is composed entirely of wild stock, with straying rates running 4 to 8 percent, a rate accepted by experts to be normal and necessary to maintain genetic diversity of the wild stock (ODFW, 1990).

John Day River summer steelhead are currently classified as a wild population on Oregon's Wild Fish Management Policy Provisional Wild Fish Population List [OAR 635-07-529(3)]. A population meets ODFW's definition of a wild population if it is an indigenous species, naturally reproducing within its native range, and descended from a population that is believed to have been present in the same geological area prior to the year 1800. Human caused genetic changes, either from interbreeding with hatchery origin fish or habitat modification, do not disqualify a population from the wild classification under this definition.

Life History and Population Characteristics

Adult steelhead on their spawning migration enter the Columbia River in mid-May, pass over Bonneville Dam July-August, and enter the John Day River (JDR) as early as September, and as late as March. Emigration into the John Day Basin is dependant upon water temperatures and flows, and usually peaks in October (Unterwegner, 1999, personal communication). Steelhead will likely hold in the Columbia or the lower Deschutes Rivers until water temperatures in the JDR are suitable.

Wild summer steelhead spawn in the basin from March to mid June. A majority of steelhead spawn in tributaries that enter the John Day River ranging from as low in the basin as Rock Creek, which is located near Condon, to those streams entering the upper main forks. About 20 percent may spawn in the upper main forks of the river, depending on spring runoff conditions. Typically the earliest spawning occurs in tributaries in the lower basin, probably because flows decrease earlier in these more arid drainages.

Steelhead eggs take about 30 days at 50° F to hatch, and another two to three weeks to reach fry stage. Time required for incubation varies significantly with water temperature (ODFW, 1990). Fry emergence occurs in spring or early summer depending on time of spawning and water temperature during incubation.

Wild summer steelhead juveniles rear in the John Day basin for two to three years before migrating to the ocean as smolts. Rearing fish thrive in moderate gradient streams with high quality water, with summer water temperatures ranging from 50 to 65 degrees F. They also need streambank vegetation (grasses/sedges/, shrubs and trees) for food, cover, shade, nutrient cycling, good aquatic insect production, complex instream hiding cover, and instream large wood/structure. Ample pool habitat is essential in maximizing fish production.

Smolt migration out of the John Day Basin is staggered over several months (April to July), with peak timing in April and May (Unterwegner, 1999, personal communication). Smolt size varies by stream depending on food abundance and rearing water temperatures. Generally, healthy wild smolts average 7 inches in length. Some may be as large as 10 inches in some streams (Beech Creek, for example).

Downstream smolt movement is quite rapid, taking 45 days or less for smolts to reach the ocean from upstream rearing areas. Smolts migrate to the ocean with very determined swimming and feeding along the way. While in migration corridor habitat of the lower John Day River (Below Kimberly, RM 185, see Table B1), smolts generally stay within the river thalweg, using water depth and turbidity for cover (Unterwegner, 1999, personal communication). Smolts may stop and feed along backwaters and edges occasionally, or feed in the main current. Most smolts will reach the ocean by May, June, or July depending on the time of migration.

John Day summer steelhead typically return after one or two years in the Pacific ocean (termed 1-salt or 2-salt steelhead). About 80 percent of the John Day steelhead run are 2-salt fish. Typical of other summer steelhead stocks, very few steelhead return to spawn a second time in the John Day River Basin.

Table B1. John Day River Segments and habitat utilization by steelhead trout*

River Segment	Steelhead Habitat Use
John Day River, Mouth (RM 0.0) to Kimberly (RM 185.0)	Migratory Corridor (No Rearing Habitat)
John Day River, RM 185.0 to RM 240.0 (Mount Vernon)	Juvenile Winter Rearing Habitat
John Day River, Mount Vernon (RM 240) to City of John Day (RM 248)	Juvenile Summer Rearing Habitat
John Day River, City of John Day (RM 248 to Headwaters)	Adult Spawning, Juvenile Rearing Habitat
South Fork John Day River, Mouth (RM 0.0) to Izee Falls (RM28.5)	Adult Spawning, Juvenile Rearing Habitat. No steelhead access above falls.
North Fork John Day River, Mouth (RM 0.0) to Camas Creek (RM 57.0)	Juvenile Winter Rearing Habitat. No Prineville BLM lands above RM 50.5
Middle Fork John Day River, Mouth (RM 0.0) to Highway 395 (RM 24.0)	Juvenile Winter Rearing Habitat
Middle Fork John Day River, Highway 395 (RM 24.0) to Headwaters	Adult Spawning, Juvenile Rearing Habitat

*Source: Unterwegner, Personal Communication

Chilcote (1998), assessed abundance, trend, and recruitment patterns for all five populations of John Day steelhead: Lower mainstem (below Picture Gorge, RM 204), Upper Mainstem (above Picture Gorge), North Fork, Middle Fork, and South Fork. The general pattern in abundance for these populations shows a low point during the late 1970s followed by an increasing trend leading to peak counts during the late 1980s (Table B2). Recently, all populations have declined to lows similar to those observed in the late 1970s.

Table B2. Index of steelhead spawners per stream survey mile for the five populations of John Day summer steelhead (1974-1997).

Year	Lower Mainstem	Upper Mainstem	North Fork	Middle Fork	South Fork
1974	4.2	5.4	5.3	5.8	13.1
1975	12.2	8.1	7.4	8.5	18.8
1976	5.7	7.4	5.8	12.8	10.4
1977	0.7	9.2	3.8	10.3	12.7
1978	7.0	6.1	2.0	8.2	7.3
1979	0.3	0.9	1.9	1.6	3.8
1980	5.3	6.1	2.7	3.1	7.2
1981	5.8	3.8	3.2	6.2	5.7
1982	3.5	4.1	4.3	5.8	9.9
1983	3.9	8.2	5.1	4.1	12.0
1984	4.5	6.5	2.3	4.7	8.1
1985	7.0	10.9	9.3	7.7	15.4
1986	20.7	16.6	8.5	16.5	13.8
1987	21.9	16.3	9.6	9.7	18.4
1988	15.8	20.9	7.8	17.3	19.4
1989	6.5	5.8	1.5	5.8	3.5
1990	5.1	5.8	1.6	2.3	8.4
1991	3.8	3.5	1.8	3.8	4.2
1992	5.0	10.1	5.1	15.9	5.4
1993	1.8	2.3	2.0	3.5	3.2
1994	1.2	4.6	2.3	4.7	5.8
1995	1.8	1.4	1.6	1.6	2.8
1996	3.0	2.3	4.7	2.7	3.1
1997	3.0	2.2	2.6	3.0	1.9

The Lower Mainstem, Upper Mainstem, and South Fork populations have remained depressed for several years (Figures 1, 2, and 5). During the last four years, these populations have been less than half of estimated equilibrium levels. While equally low or lower spawner densities were estimated in the 1970s, the levels observed in the 1990s cover a longer period of time (Chilcote, 1998).

Plots of spawner density indices for the Upper Mainstem (Figure 2), North Fork (Figure 3), and Middle Fork (Figure 4), populations all show a spike in abundance for the 1992 spawning year. A similar pattern was not observed in the Lower Mainstem and is indistinct in the South Fork (Chilcote, 1998).

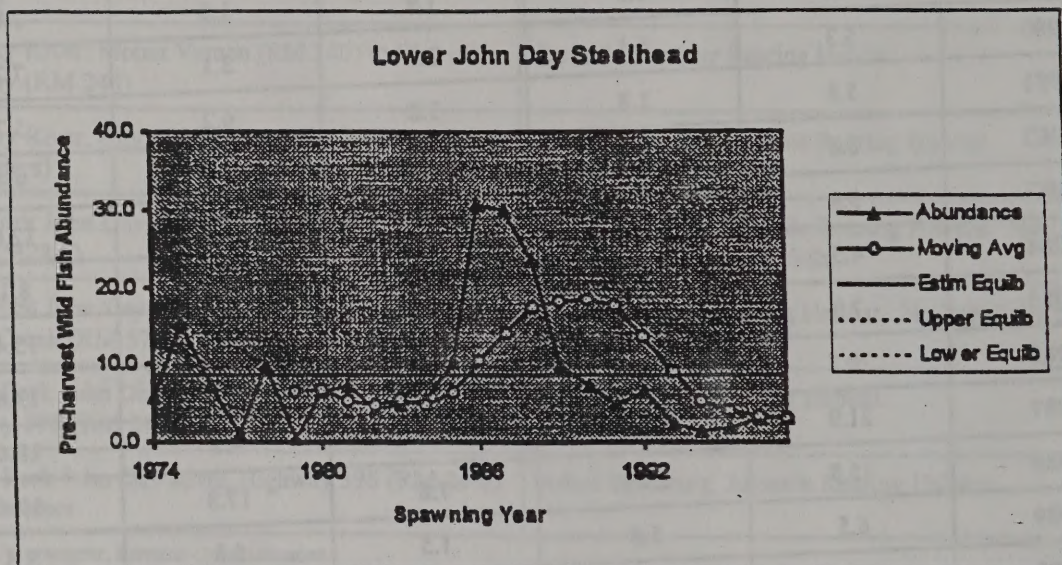


Figure 1. Annual and six-year moving average estimates of the pre-harvest abundance of wild steelhead in lower mainstem tributaries of the John Day River, 1974-97 relative to predicted population equilibrium (N^*) and associated upper and lower confidence bounds derived from recruitment modeling. (Chilcote, 1998)

According to Chilcote (1998), the spawner abundance analysis suggests the Lower Mainstem and South Fork John Day populations are the least healthy within the basin. The South Fork population in particular shows a decline in spawner densities large enough to warrant concern about its likely persistence.

Except for the South Fork John Day population, there are no obvious signs that steelhead populations in the basin are reproductively failing or at critically low population levels. The underlying recruitment relationship for the John Day populations suggest that their capacity to respond to environmental changes is still intact. Data suggest that much of the decline in recent years has been due to poor smolt to adult survival and not population failure within basins.

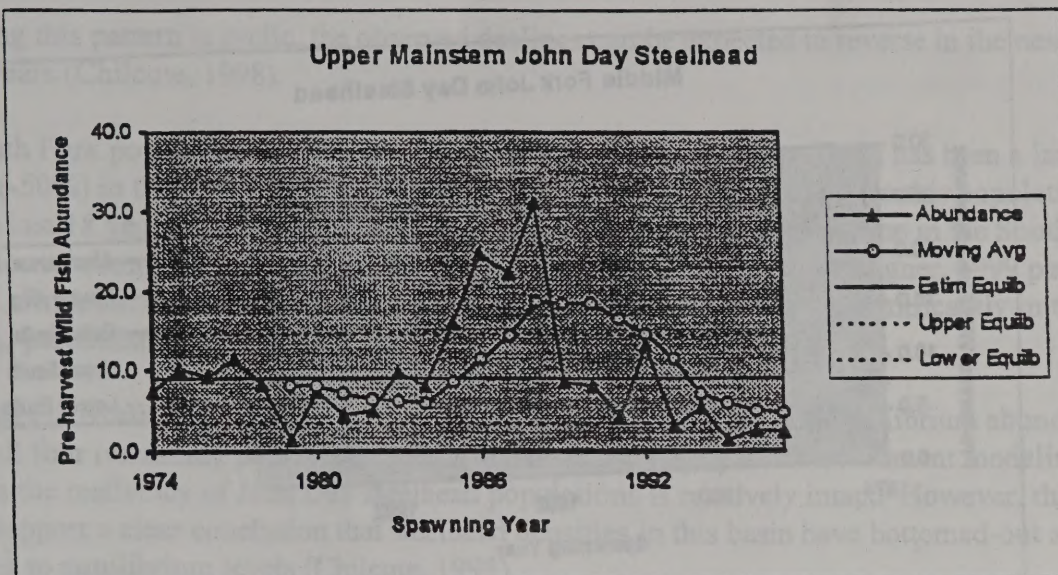


Figure 2. Annual and six-year moving average estimates of the pre-harvest abundance of wild steelhead in upper mainstem tributaries of the John Day River, 1974-97 relative to predicted population equilibrium (N^*) and associated upper and lower confidence bounds derived from recruitment modeling. (Chilcote, 1998)

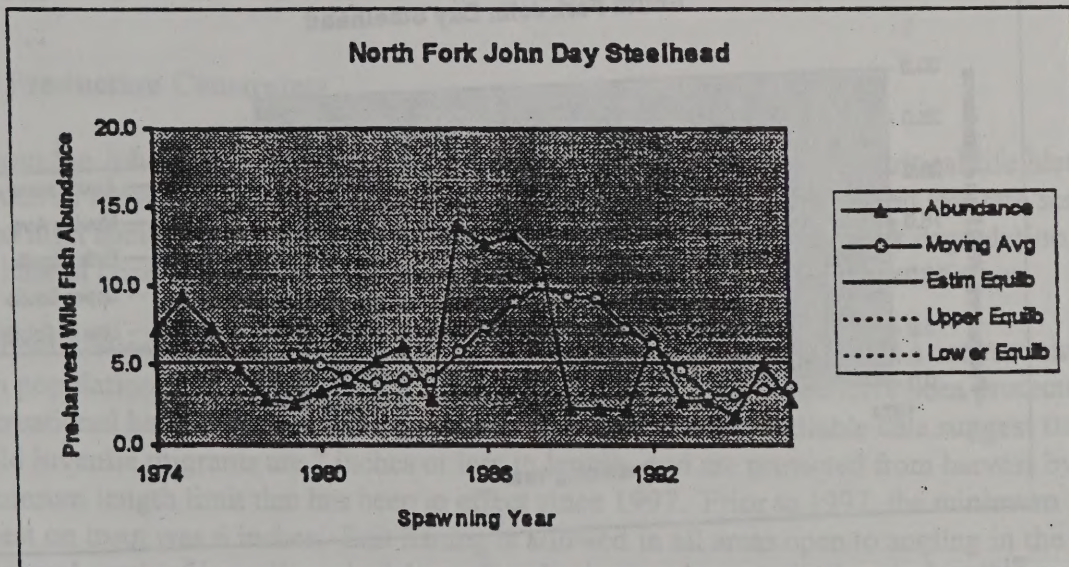


Figure 3. Annual and six-year moving average estimates of the pre-harvest abundance of wild steelhead in the North Fork John Day River, 1974-97 relative to predicted population equilibrium (N^*) and associated upper and lower confidence bounds derived from recruitment modeling. (Chilcote, 1998)

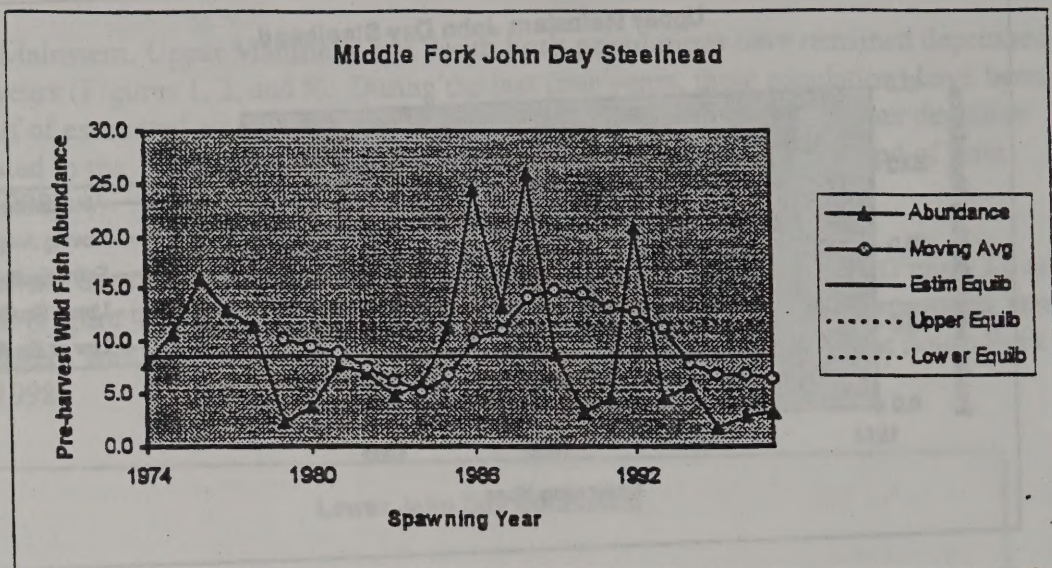


Figure 4. Annual and six-year moving average estimates of the pre-harvest abundance of wild steelhead in the Middle Fork John Day River, 1974-97 relative to predicted population equilibrium (N^*) and associated upper and lower confidence bounds derived from recruitment modeling. (Chilcote, 1998)

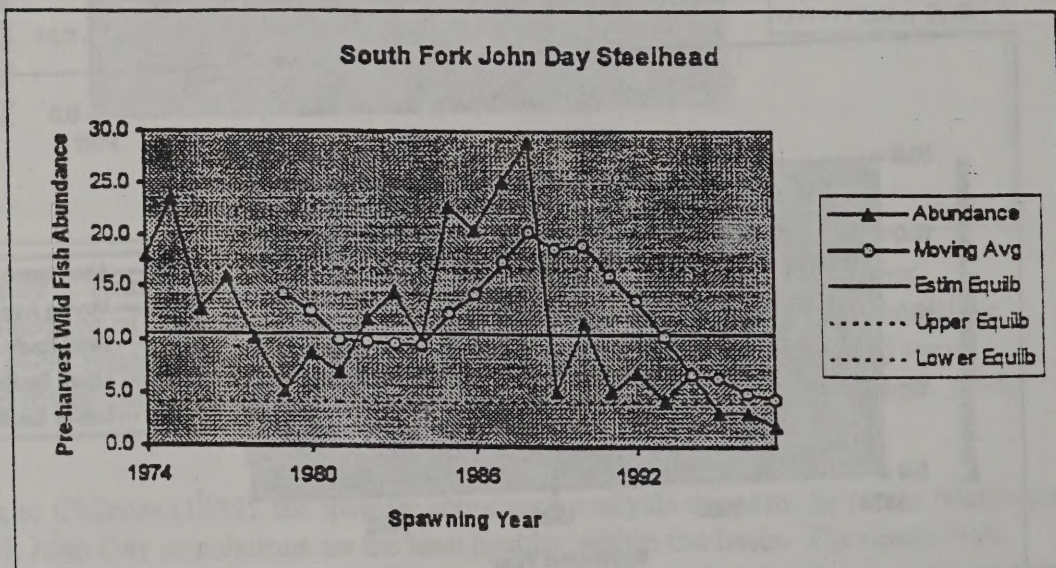


Figure 5. Annual and six-year moving average estimates of the pre-harvest abundance of wild steelhead in lower mainstem tributaries of the John Day River, 1974-97 relative to predicted population equilibrium (N^*) and associated upper and lower confidence bounds derived from recruitment modeling. (Chilcote, 1998)

Assuming this pattern is cyclic, the observed declines can be expected to reverse in the next three to five years (Chilcote, 1998).

The South Fork population appears to warrant an extirpation warning. There has been a large decline (-50%) in the six-year moving average abundance of wild steelhead in this population over the last 18 years (Chilcote, 1998). The reason for this exceptional decline in the South Fork population as compared to other John Day populations is unknown (Unterwegner, 1999 personal comm.). Riparian conditions in the South Fork watershed have improved significantly in the last 20 years, particularly on BLM managed lands.

Although the North Fork population appears to be returning to expected equilibrium abundance levels, all four remaining populations in this basin remain depressed. Recruitment modeling suggests the resiliency of John Day steelhead populations is relatively intact. However, the data do not support a clear conclusion that steelhead densities in this basin have bottomed-out and are returning to equilibrium levels (Chilcote, 1998).

Hatchery fish are not released into any of the five populations examined in the John Day Basin. In addition, this basin has the distinction of being one of the few large basins in Oregon with no history of a steelhead hatchery program. Although stray hatchery steelhead are caught in the lower mainstem, especially in the fishery below Cottonwood Bridge (RM 40), they have been rare in the upper basin. It is estimated that hatchery fish comprise less than 5 percent of the naturally spawning population (Chilcote, 1998).

Natural Production Constraints

Throughout the John Day basin wild summer steelhead utilize tributaries for critical life history phases such as spawning and rearing. Many of these tributaries naturally exhibit low late season flows and high summer water temperatures. In some areas historic stream bank degradation, poor riparian habitat conditions and ongoing irrigation withdrawals intensify these conditions.

Recreational harvest of wild summer steelhead in the JDR basin may have had a constraining effect on population size. Wild adult summer steelhead in the JDR basin have been protected from recreational harvest by regulation since September of 1995. Available data suggest that most wild juvenile migrants are 7 inches or less in length, and are protected from harvest by the 8 inch minimum length limit that has been in effect since 1997. Prior to 1997, the minimum length for harvest on trout was 6 inches. Bait fishing is allowed in all areas open to angling in the basin and incidental catch of juvenile and adult steelhead migrants is a possibility.

Based on studies from other river basins in the Pacific Northwest, there is speculation that recreational hooking and handling mortality of wild steelhead adults by hook and line anglers may contribute nearly 10 percent adult mortality of all caught and released fish (Unterwegner,

1999, personal comm.). This recreational angler induced mortality may be a significant management concern.

Natural events and conditions within the basin also constrain natural production.

Passage blocked naturally by Izee Falls on the South Fork John Day River (RM 28.5) prevents steelhead production in this segment of the South Fork and numerous tributaries to it. Several unscreened irrigation diversions in the Upper John Day subbasin contribute to losses of juvenile summer steelhead.

Prolonged drought conditions that started in the subbasin in 1984 or 1985 and continued more or less until 1994, exacerbated mainstem and tributary habitat deficiencies and may have contributed significantly to declining summer steelhead populations in the JDR basin.

A variety of man's activities outside and within the basin constrain natural production.

Passage conditions for both juvenile and adult anadromous fish at Columbia River mainstem dams contribute to declines in wild summer steelhead. The Dalles Dam, which all John Day River migrants must pass, has one of the lower rates of juvenile salmonid passage efficiency for mainstem Columbia dams due to a lack of turbine screening and effective juvenile bypass facilities. Bonneville Dam, particularly Powerhouse 2, does not have particularly effective juvenile turbine screening. Increased spill of water at both The Dalles and Bonneville dams to increase survival of Federal Endangered Species Act listed Snake River salmon should result in better survival of wild John Day River summer steelhead at these dams. Longer travel time for juveniles through dam created reservoirs in the Columbia, increased water temperature in the reservoir environment, and increased predation near mainstem dams all contribute to increased losses of juvenile and adult wild summer steelhead.

Harvest of wild summer steelhead by treaty tribal fisheries in the mainstem Columbia River is governed by the Columbia River Fish Management Plan (CRFMP 1987). This plan, agreed to by the four treaty tribes, the United States of America, and the states of Oregon, Washington, and Idaho, directs mainstem harvest decisions on wild summer steelhead using run sizes at Bonneville Dam. Treaty tribal impacts to wild summer steelhead are not to exceed 15% of the Group A (those crossing Bonneville Dam April 1 to August 25) wild escapement and 32% of the Group B (those crossing Bonneville Dam August 26 to October 31) wild escapement during fall treaty seasons. Harvest of wild summer steelhead by treaty tribal fisheries in the mainstem Columbia River has been and will continue to be a source of mortality to John Day River basin origin wild summer steelhead.

Habitat problems affecting most inland steelhead trout populations include irrigation diversions and livestock grazing. These activities can modify river and stream channels; remove riparian vegetation; block migration routes seasonally; decrease summer flows; and increase summer water temperatures. Some populations have retreated to headwater areas as a result of these

activities, causing extensive population fragmentation and declines in numbers (Kostow, 1995). Several efforts exist within the basin, specifically watershed councils in the North Fork of the John Day subbasin and the Upper Mainstem subbasin, to offer alternative methods of irrigation withdrawal to minimize impacts to habitat. Although BLM does not manage private lands, BLM is working in concert with local watershed councils where issues addressed include removal of push-up dams for irrigation and replacing them with pumping stations. Implementation of these methods improves efficiency of withdrawals and improves passage concerns.

Natural events outside the subbasin also constrain natural production in the subbasin. According to Chilcote (1998), all seven Oregon populations in the Middle Columbia ESU (Lower John Day, Upper John Day, S. Fork John Day, N. Fork John Day, M. Fork John Day, Deschutes River, and the Umatilla River) appear to share a pattern of relatively high abundance during the mid-1980s, followed by a decline in the 1990s. This decline coincides with decreases in smolt-to-adult survival as estimated from hatchery fish released from Round Butte Hatchery. Because of this observation and the fact the decline in abundance is shared by all populations, the best explanation for the downward trend is common survival factors, most likely mainstem Columbia passage and ocean survival (Chilcote, 1998).

According to Taylor (1997), scientists have found that chinook salmon returns in the Northwest show long-term trends which closely follows the climate cycles. Anderson (1995), used the "Pacific Northwest Index" (PNI) to distinguish cool, wet periods from warm, dry periods using data which goes back to 1896. Anderson then compared PNI with Columbia River spring chinook salmon returns data which goes back to 1940. The correlation between spring chinook and PNI is very strong, and indicates that salmon returns increase during cool, wet periods and decline during warm, dry periods. The period 1976-1994 was considered a "Generally dry and warm" cycle. While there are numerous habitat parameters throughout all life history phases for steelhead, natural variability from climate cycles may be a very significant influence (Taylor, 1997).

There are indications that global ocean and atmosphere conditions are the cause of long-term climate variations which affect precipitation trends in the Northwest. There is also evidence that a switch in regimes occurred in late 1994, and that conditions which tend to yield wet, cool winters in the Northwest have returned (Taylor, 1997).

Ocean productivity is known to be cyclic and responsible for trends in anadromous species survival and abundance. Natural variation in ocean productivity and subsequent survival of summer steelhead in the ocean environment may be an important factor in John Day River basin summer steelhead abundance. Protection and enhancement of subbasin habitat and summer steelhead populations remains; however, very important.

Low flow and high water temperatures in the Columbia River during drought years magnify mainstem dam passage problems for both adult and juvenile summer steelhead.

General Baseline Conditions for the entire John Day River Basin

Riparian Plant Community Conditions

Riparian areas generally make up less than 1 percent of the public lands in the planning area. These areas contribute to biological diversity, streambank and channel stability, and water quality, yet are often the most heavily utilized. Recreation, livestock, agriculture/irrigation, roads, and wildlife all contribute to the total use of these fragile areas. (Two Rivers RMP, 1985). Ecological condition and trend data for riparian areas was collected in the John Day Basin BLM managed lands. Since that time, with the implementation of the Strategy for Salmon 1992, and PACFISH 1994, many riparian areas have management in place to protect and enhance their condition.

Upslope Plant Communities

The planning area generally falls within the Columbia Basin physiographic province. The vegetation is predominately big sagebrush/bunchgrass and bunchgrass, with some communities dominated by rabbitbrush and snakeweed. The rolling hills and plateaus above the drainages are usually dominated by big sagebrush on deeper soils, with low and/or stiff sagebrush on shallower soils. Bunchgrass dominated communities are also found on some of the plateaus and on most of the steep slopes of the river canyons. Public lands in the upper subbasins are dominated by ponderosa pine, Western juniper and big sagebrush vegetation zones. Western juniper has increased in abundance in many areas and led to a change in vegetative composition, due in large part to historic fire suppression in these areas.

Spawning Areas

Summer steelhead spawning areas on public lands cover much of the basin. Some streams with documented spawning include tributaries of the upper mainstem John Day River (Dixie, Standard, Indian, Canyon, and Cottonwood Creeks), the South Fork John Day River (Deer and Murderers Creeks), the North Fork John Day River (Rudio Creek), and the Lower John Day River (Bridge, Bear, Gable, Ferry Canyon, Little Ferry Canyon, Pine Hollow, Long Hollow, and Jackknife Canyon).

Habitat Conditions and Trends

Conditions of the mainstem John Day River, its forks and its tributaries are in various stages of recovery and trends for all life stages of summer steelhead. Fish habitat condition, and trend surveys were conducted in 1980-81 on most perennial and fish bearing streams in the basin. Some surveys were repeated in 1989-1990.

Baseline Conditions for the Upper John Day Subbasin 17070201.

Introduction

The Upper John Day watershed encompasses 1.37 million acres from the headwaters of the John Day River upstream of Prairie City to the mouth of the North Fork John Day River at Kimberly, at River Mile 185. BLM manages about 145,635 acres within the subbasin. Major tributaries within the subbasin include Canyon, Beech, Rock, and Johnson Creeks and the South Fork John Day River. Streams on this list generally carry perennial flows, based on U.S.G.S. Quadrangle maps or direct observations. (See Table B3).

Table B3. Streams with BLM ownership, total number of stream segments on BLM parcels, what it flows into, and current steelhead status.

Stream Name	Public (BLM) Miles	# Of Stream Segments	Tributary to	Steelhead Waters
John Day River	2.6	6	Columbia River	Winter Juvenile Rearing
Dads Creek	0.3	1	John Day River	Spawning and Rearing
Dixie Creek	2.4	3	John Day River	Spawning and Rearing
Standard Creek	1.1	3	Dixie Creek	Spawning and Rearing
West Fork Standard Cr.	0.9	1	Standard Creek	Spawning and Rearing
Comer Creek	0.2	2	Dixie Creek	Spawning and Rearing
Bull Run Creek	0.8	1	Dixie Creek	No
Bear Creek	0.6	2	John Day River	Spawning and Rearing
Indian Creek	0.4	1	John Day River	Spawning and Rearing
W. Fk. Little Indian Cr.	0.2	2	Indian Creek	No
Pine Creek	0.3	2	John Day River	Spawning and Rearing
Bear Gulch	0.3	1	Pine Creek	No
Grub Creek	0.3	1	John Day River	Spawning and Rearing
Little Pine Creek	1.6	2	John Day River	Spawning and Rearing
Canyon Creek	1.4	3	John Day River	Spawning and Rearing
Sheep Gulch	1.0	1	Canyon Creek	No
Hanscombe Cr. trib	0.2	1	Hanscombe Cr.	No
Beech Creek	0.2	2	John Day River	Spawning and Rearing

Capsutt Creek	0.4	1	Riley Creek	No
McClellan Creek	0.1	1	John Day River	Spawning and Rearing
Big Canyon	0.9	1	Fields Creek	No
Warrens Creek	1.0	1	John Day River	No
West Dry Creek	0.4	1	Dry Creek	No
Marks Creek	0.4	1	John Day River	No
Flat Creek	0.5	1	John Day River	Spawning and Rearing
Franks Creek	5.1	3	John Day River	1.5 miles Spawning and Rearing, 3.6 miles No (barrier)
Belshaw Creek	0.1	1	John Day River	Spawning and Rearing
Ferris Creek	1.2	3	John Day River	No
Sheep Gulch	4.0	1	John Day River	No
Battle Creek and tribs	5.2	3	John Day River	No, but Potential Habitat
Cottonwood Creek	1.4	4	John Day River	Spawning and Rearing
Dyke Creek	0.4	1	Cottonwood Cr.	No
Day Creek	0.6	2	Cottonwood Cr.	No, blocked on private land
S. Fk. John Day River	10.2	9	John Day River	Spawning and Rearing
S. Fk. John Day River	5.2	12	John Day River	No, access blocked by falls
Johnson Creek	0.5	1	SFJDR	No
Smoky Creek	1.6	2	SFJDR	No, access blocked by culvert
Tunnel Creek	0.2	1	SFJDR	No
Oliver Creek	1.1	1	SFJDR	No
Youngs Creek	0.6	2	SFJDR	No
Murderers Creek	0.4	1	SFJDR	Spawning and Rearing
Cabin Creek	0.6	1	Murderers Cr.	Spawning and Rearing
Frazier Creek	1.2	1	Wind Creek	0.2 miles Spawning and Rearing, 1.0 blocked by falls
Martin Creek	1.6	3	SFJDR	No
Cougar Gulch	2.0	3	SFJDR	Spawning and Rearing
Deer Creek	3.0	1	SFJDR	Spawning and Rearing

Round Creek	1.4	1	Deer Creek	No
Dugout Creek	0.6	1	Deer Creek	No
Sunflower Creek	1.0	1	Deer Creek	No
Wildcat Creek	0.5	1	Sunflower Cr.	No
Indian Creek	1.3	3	SFJDR	No
Sock Hollow	0.7	3	SFJDR	No
Dry Soda Creek	0.6	2	SFJDR	No
Abbott Creek	1.5	1	SFJDR	No
Poison Creek	0.3	1	SFJDR	No
Flat Creek	1.2	2	SFJDR	No
Utley Creek	1.6	2	Flat Creek	No
Delles Creek	0.4	1	Corral Creek	No
Packwood Creek	0.2	1	Brisbois Creek	No
Tamarack Creek	0.2	1	Antelope Creek	No
Rock Creek	0.4	1	John Day River	Migration Corridor
Unnamed trib	1.2	1	Rock Creek	No
Birch Creek	0.3	1	Rock Creek	Spawning and Rearing
West Birch Creek	2.0	3	Birch Creek	0.9 mi. Spawning and Rearing, 1.1 mi. no access
West Birch Creek trib.	0.7	1	W. Birch Creek	No
East Birch Creek	0.2	2	Birch Creek	No access
Squaw Creek	1.0	2	John Day River	Spawning and Rearing
Indian Creek	0.2	1	Squaw Creek	Spawning and Rearing
Frank Creek	0.6	2	Squaw Creek	No
Buckhorn Creek	1.0	3	Squaw Creek	Potential Spawning and Rearing
Willow Creek	0.7	1	Rock Creek	Spawning and Rearing
Fopiano Creek	0.4	2	Willow Creek	Spawning and Rearing
Dick Creek	0.8	2	John Day River	No
Johnny Creek	2.0	2	John Day River	No
Bull Canyon	1.1	1	John Day River	No

Deep Creek	0.5	1	John Day River	No
Harry Creek	0.9	4	John Day River	No
McGinnis Creek	1.6	1	John Day River	No
Branson Creek	3.8	2	John Day River	Potential Spawning and Rearing
Bone Creek	0.5	1	John Day River	No
Rose Creek	0.4	1	John Day River	No
Spring Creek	0.3	1	John Day River	No
Holmes Creek	1.7	4	John Day River	1.0 mi. Spawning and Rearing, 0.8 No.
Burnt Corral Creek	1.0	2	Holmes Creek	0.7 mi. Spawning and Rearing, 0.3 mi. No
Johnson Creek	1.4	5	John Day River	1.3 mi. Spawning and Rearing
Hide and Seek Creek	0.7	2	Johnson Creek	No
Unnamed Trib.	0.6	1	Johnson Creek	No
China Hat Creek	0.3	1	Johnson Creek	No

Description of Ratings of Baseline Indicators for Dads, Dixie, Standard, W. Fork Standard, Comer, Bull Run, Bear, Indian, W. Fork Little Indian, Pine, Bear Gulch, Grub, Little Pine, Canyon, Sheep Gulch, Hanscombe tributary, Beech, Capsuttle, McClellan, Big Canyon, West Birch, West Birch tributary, and East Birch Creeks.

Water Temperature: From data and professional judgment, most of the creeks in this matrix list are known or suspected to meet the criteria of 57°F for spawning, and 64°F for summer rearing. Water temperatures have been monitored in Dixie, Standard, Canyon, and Indian Creeks.

Properly Functioning

Sediment/Turbidity: There is no sediment data on these streams except Dixie and Standard Creeks (both are properly functioning). Turbidity generally is low. Professional judgement from direct observations would rate these streams as **Properly Functioning or At Risk**

Chemical Contamination/Nutrients: Nearly all reaches are above agriculture areas. No DEQ 303d listed reaches for chemical or nutrient concerns. Professional judgement would rate these streams as **Properly Functioning to Functioning at Risk**

Physical Barriers: Physical barriers below irrigation diversions exist on Dixie and Standard Creeks, and do not allow fish passage at base flows. **At Risk**

Substrate Embeddedness: There is little substrate embeddedness data available for these streams. Professional judgement would rate them as **At Risk**. This is due to direct observations and good streambank stability noted on most stream segments.

Large Wood: There is no quantified large wood data for these streams. Professional judgement would rate them as **Properly Functioning**. This is due to ample amounts of LWD observed in many of these stream segments. Although LWD pieces are not always 35 feet in length but are twice bankfull width, they function well in these small streams.

Pool Frequency: Based on direct observations of these streams in areas that have potential to meet standards (i.e. not high gradient reaches), pool frequency would be considered **Not Properly Functioning**.

Pool Quality: There is no sediment data on these streams except Dixie and Standard Creeks (both have low surface fine levels). Deep pools are uncommon, but generally have good cover and cool water and probably have moderate volume reductions from fine sediments. Professional judgement from direct observations would rate these streams as **Properly Functioning or At Risk**.

Off-Channel Habitat: Due to the small size and moderate to steep gradient of these stream, little to no off channel habitat is expected to occur. **Not Applicable**

Professional judgement would rate the stream segments individually as too small to maintain viable sub-populations, but sufficient in size if grouped with additional stream segments on National Forests. **Properly Functioning or At Risk**

Wetted Width/Max Depth Ratio: There is no current width to depth ratio data available for these streams. Professional judgment from direct observations would rate them as **At Risk**.

Streambank Condition: Based on review of 1980 and 1989 riparian inventories and direct observations, most streams appear to be **At Risk**.

Floodplain Connectivity: Past mining, road building, grazing, and logging activities along these streams has reduced the linkage of wetland, floodplains, and riparian areas from main channels. Condition rated **At Risk**, from direct observation and professional judgment.

Changes in Peak Flow/Base Flow: Flow data is either not available or does not exist for most of these streams. BLM peak crest gauges are installed in Dixie and Standard Creeks. Based on the highly mixed and fragmented land ownership pattern of BLM/private lands it is difficult to assess this watershed influenced habitat parameter. Professional judgement estimates condition as **At Risk**.

Drainage Network Increase: Increases of the drainage network are generally limited to road interaction with streams. Rills or gullies associated with roads and ATV trails are evident. Common off road use occurs in the Dixie/Standard and Little Pine Creek drainages. Because of this, condition is rated **Not Properly Functioning**

Road Density and Location: Estimated average road densities for all BLM lands are between 2-3 mi/mi², with some valley bottom roads. **Functioning at Risk**

Disturbance History: Most BLM forested tracts have not had significant timber harvest, so past disturbance (% ECA) is less than 15%. **Properly Functioning**

Riparian Reserves: To be able to answer this question an assessment of the potential of the different riparian sites would have to be made. At this time no such assessment has occurred on the public lands on these streams. **Not Applicable**

Description of Ratings of Baseline Indicators for the Following Streams; John Day River, Warrens, West Dry, Marks, Flat, Franks, Belshaw, Ferris, Sheep Gulch, Battle and tribs, Cottonwood, Dyke, Day, Rock and unnamed trib., Birch, Squaw, Indian, Frank, Buckhorn, Willow, Fopiano, Dick, Johnny, Bull Canyon, Deep, Harry, McGinnis Branson, Bone, Rose, Spring, Holmes, Burnt Corral, Johnson, Hide and Seek, unnamed trib., and China Hat Creeks.

Water Temperature: None of the creeks listed for this matrix, with the exception of Cottonwood and Battle Creeks, have been monitored for temperature. All likely exceed the criteria of 64°F for migration and rearing habitat. **Not Properly Functioning**

Sediment/Turbidity: There is no sediment data for these streams. Turbidity generally is low to moderate. Professional judgement from direct observations would rate these streams as **At Risk**

Chemical Contamination/Nutrients: Nearly all reaches are above agriculture areas. No DEQ 303d listed reaches. Professional judgement would rate these streams as **Properly Functioning or At Risk**

Physical Barriers: Battle Creek reportedly is intercepted into a irrigation canal near the streams mouth (below BLM). There are no other known man-made barriers for the streams listed in this matrix. **Properly Functioning**

Substrate Embeddedness: There is no substrate embeddedness data available for the creeks listed for this matrix. Professional judgement would put it in either the **At Risk or the Not Properly Functioning** category. This is due to direct observations of land management impacts on BLM and upstream private lands.

Large Wood: There is no quantified large wood data available for the creeks listed for this matrix. Professional judgement would put it in the **Not Properly Functioning** category. This is due to the lack of instream wood observed and that some streams are not in forested areas and naturally will not attain matrix standards..

Pool Frequency: Recent pool frequency data is not available for the creeks listed for this matrix. Professional judgement would put them in the **Not Properly Functioning** category. This is based on 1980 stream surveys of Rock, Birch, Squaw, Indian, Willow, Fopiano, Day, and Johnson Creeks and also direct observations made.

Pool Quality: There is no sediment data available for the creeks listed for this matrix. Professional judgement would put it in either the **At Risk or the Not Properly Functioning** category, based on non-comprehensive observations made.

Off-channel Habitat: No information is available rate these streams. Based on direct observations, condition is rated as **At Risk**.

Refugia: Based on professional judgement these stream segments are not of sufficient length, size, number and connectivity to maintain viable populations or sub-populations or serve as refugia. These segments generally are scattered among large portions of private lands, and not adjacent to other large stream segments on National Forest lands. **Not Properly Functioning**

Wetted Width/Max Depth Ratio: There is no current wetted width/max depth ratio data available for the creeks listed for this matrix. Professional judgement would put it in the **Not Properly Functioning** category. This is due to the lack of stability of these systems and also direct observations made.

Streambank Condition: There is no current streambank condition data available for the creeks listed for this matrix. From professional judgement and review of 1980 stream stability surveys, these streams are rated as **At Risk**.

Floodplain Connectivity: Little historic data exists showing the extent of wetlands and the frequency of overbank flows to compare to current conditions. Condition rated **At Risk**, based on direct observation and because of past management.

Changes in Peak Flow/Base Flow: There is little to no flow data available for the creeks listed for this matrix. Professional judgement would put it in the **At Risk** category. This is due to the reduction of perennial grasses and riparian vegetation in some areas that has probably limited the ability of these watersheds to dissipate energy and to store water. This could increase the peak flows on these systems, but would be difficult to measure.

Drainage Network Increase: Increases of the drainage network are generally limited to road interaction with streams. No data exists to show what changes may have occurred. Because some road fords occur through these streams, this condition is rated **At Risk**.

Road Density and Location: Estimated average road densities for all BLM lands are between 2-3 mi/mi², with roads along most stream segments. **Functioning at Risk**

Disturbance History: Most BLM forested tracts have not had significant timber harvest, so past disturbance (% ECA) is less than 15%. Generally harvesting has not been concentrated in unstable or riparian areas. **Properly Functioning**

Riparian Reserves: To be able to answer this question an assessment of the potential of the different riparian sites would have to be made. At this time no such assessment has occurred on the public lands on these streams. **Not Applicable**

Description of Ratings of Baseline Indicators for the South Fork John Day River and tributaries; Johnson, Smoky, Tunnel, Oliver, Youngs, Murderers, Cabin, Frazier, Martin, Cougar Gulch, Deer, Round, and Dugout Creeks.

Water Temperature: From data and professional judgment, most of the creeks in this matrix list are known or suspected to meet the criteria of 57°F for spawning, but not 64°F for summer rearing. Water temperatures have been monitored in the South Fork John Day River, Murderers and Deer Creeks. **At Risk**

Sediment/Turbidity: Percent surface fines data has been collected on Deer and Murderers Creeks. Turbidity is high, from direct observations, particularly on the South Fork John Day. Professional judgement from data and direct observations would rate these streams as **Not Properly Functioning**. High sediment loads are present in the SFJDR drainage during peak runoff and intense thunderstorms (OWRD, 1986). Livestock grazing, timber harvest/road construction, farm practices, stream channelization, and natural conditions have contributed to these conditions.

Chemical Contamination/Nutrients: The upper South Fork John Day River is dominated by private agriculture and grazing activities near the river, but water contamination levels is unknown. Tributary streams in this matrix are not influenced by agriculture activities. No DEQ 303d listed reaches. Professional judgement would rate these streams as **At Risk**

Physical Barriers: All steelhead access is blocked into Smoky Creek by an impassable culvert. Replacement of culvert to restore steelhead access planned for summer 2000. **Not Properly Functioning**

Substrate Embeddedness: There is little substrate embeddedness data available for these streams. Professional judgement would rate them as **Not Properly Functioning**. This is due to direct observations and high turbidity levels in the South Fork.

Large Wood: There is no quantified large wood data for these streams. Professional judgement would rate them as **Not Properly Functioning**. This rating based on professional judgement from direct observations. Several stream segments are not in forested areas, and may not have potential to reach this criteria range.

Pool Frequency: Based on direct observations of these streams, pool frequency would be considered **Not Properly Functioning**.

Pool Quality: Deep pools are fairly common, generally with adequate cover, but are moderately reduced by fine sediments, especially in the SF John Day River. Professional judgement from direct observations would rate these streams as **At Risk**.

Off-Channel Habitat: Based on direct observations of some backwater areas and professional judgement, this is rated **At Risk**.

Refugia: Many of these streams segments could be potential habitat refugia. However, upstream influences (particularly on the South Fork John Day) are affecting stream temperatures and turbidity/sediment levels, which is limiting habitat potential. Riparian reserves are fairly intact, and generally improving. Professional judgement would rate the stream segments as **At Risk**

Wetted Width/Max Depth Ratio: There is no current width to depth ratio data available for these streams. Professional judgment from direct observations would rate them as **At Risk**.

Streambank Condition: Based on review of 1980 and 1989 riparian inventories, long term monitoring studies and direct observations, most streams appear to be **Properly Functioning**.

Floodplain Connectivity: Past road building, grazing, and logging activities along these streams has reduced the linkage of wetlands, floodplains, and riparian areas from main channels. Condition rated **At Risk**, from direct observation and professional judgment.

Changes in Peak Flow/Base Flow: Flow data has been collected on the South Fork John Day, Murderers Creek and Deer Creek. Past grazing activities have probably limited the ability of these watersheds to dissipate energy and store water. Upland conditions are generally improving now. Professional judgement estimates condition as **At Risk**.

Drainage Network Increase: Increases of the drainage network are generally limited to road interaction with streams. Based on roads commonly adjacent to streams and some road fords, this condition is rated **At Risk**.

Road Density and Location: Estimated average road densities for all BLM lands are less than 2 mi/mi², but valley bottom roads are common. **Functioning at Risk or Not Functioning Properly**

Disturbance History: Most BLM forested tracts have not had significant timber harvest, so past disturbance (% ECA) is less than 15%. **Properly Functioning**

Riparian Reserves: To be able to answer this question an assessment of the potential of the different riparian sites would have to be made. At this time no such assessment has occurred on the public lands on these streams. **Not Applicable**

Description of Ratings of Baseline Indicators for the South Fork John Day River and tributaries; Sunflower, Wildcat, Indian, Sock Hollow, Dry Soda, Abbott, Poison, Flat, Utley, Delles, Packwood, and Tamarack Creeks. *Streams in this list are upstream of a natural barrier to steelhead trout (Izee Falls on the SF John Day River), and are occupied by redband trout and non-game species only.*

Water Temperature: Streams in this list are upstream of natural barrier to steelhead. Water temperatures have been monitored in the SF John Day River, Indian, Sunflower, and Flat Creeks.
Not Properly Functioning

Sediment/Turbidity: There is no sediment data available for the creeks listed for this matrix. Professional judgement would put it in either the **At Risk or Not Properly Functioning** category. This is due to the direct observations made.

Chemical Contamination/Nutrients: There is no chemical or nutrient data available for the creeks listed for this matrix. Professional judgement would put it in the **At Risk** category.

Physical Barriers: Streams in this list are upstream of natural barrier to steelhead. **Not Applicable**

Substrate Embeddedness: There is no substrate embeddedness data available for the creeks listed for this matrix. Professional judgement would put it in either the **At Risk or Not Properly Functioning** category. This is due to direct observations and high turbidity levels in the South Fork.

Large Wood: There is no large wood data available for the creeks listed for this matrix. Professional judgement would put it in the **Not Properly Functioning** category. This is due to the lack of instream wood observed.

Pool Frequency: There is no current pool frequency data available for the creeks listed for this matrix. Professional judgement would put it in the **Not Properly Functioning** category. This is because it does not meet the pool frequency standards.

Pool Quality: There is no sediment data available for the creeks listed for this matrix. Professional judgement would rate this condition as **At Risk**. This is due to direct observation of volume reduction by fine sediments.

Off-channel Habitat: Based on direct observations of some backwater areas and professional judgement, this is rated **At Risk**.

Refugia: Streams in this list are upstream of natural barrier to steelhead. **Not Applicable**

Wetted Width/Max Depth Ratio: There is no current wetted width/max depth ratio data available for the creeks listed for this matrix. Professional judgement would put it in the **At Risk** category.

Streambank Condition: There is no current streambank condition data available for the creeks listed for this matrix. Professional judgement, direct observations, and review of riparian habitat inventories would categorize it as **At Risk**.

Floodplain Connectivity: Although little historic data exists showing the extent of wetlands and the frequency of overbank flows to compare to current conditions. Professional judgement would put it in to the **Properly Functioning to Functioning at Risk** category. This is due to the fair stability of these systems.

Changes in Peak Flow/Base Flow: Flow data has been collected on the South Fork John Day River. Past grazing activities have probably limited the ability of these watersheds to dissipate energy and store water. Upland conditions are generally improving now. Professional judgement estimates condition as **At Risk**.

Drainage Network Increase: Increases of the drainage network are generally limited to road interaction with streams. Based on roads commonly adjacent to streams and some road fords, this condition is rated **At Risk**.

Road Density and Location: Road densities are less than 3 mi/mi² with some valley bottom roads. **Functioning at Risk**.

Disturbance History: Most BLM forested tracts have not had significant timber harvest, so past disturbance (% ECA) is less than 15%. **Properly Functioning**

Riparian Reserves: To be able to answer this question an assessment of the potential of the different riparian sites would have to be made. At this time no such assessment has occurred on the public lands on these stream segments. **Not Applicable**

Baseline Conditions for the North Fork John Day Subbasin #17070202

Introduction

The North Fork John Day subbasin encompasses about 1.18 million acres. Prineville District BLM manages about 35,350 acres within the subbasin, from the mouth to the Umatilla/Grant County line (RM 51.4). Major tributaries within the subbasin include Granite, Desolation, Camas, Potamus, Big Wall, Cottonwood, and Rudio Creeks, and the Middle Fork John Day River. Streams on this list generally carry perennial flows, based on U.S.G.S. Quadrangle maps or direct observations. (See Table 2).

Table 2. Streams with BLM ownership, total number of stream segments on BLM parcels, what it flows into, and current steelhead status.

Stream Name	Public Miles	# Of Stream Segments	Tributary to	Steelhead Waters
North Fork John Day	15.0	20	John Day River	Winter Rearing
Sulphur Gulch	1.1	2	NFJDR	No
Hunter Creek	0.1	1	NFJDR	Spawning and Rearing
Potamus Creek	0.2	1	NFJDR	Spawning and Rearing
Mallory Ceek	0.1	1	NFJDR	Spawning and Rearing
Graves Creek	0.1	1	Mallory Creek	Spawning and Rearing
Squaw Creek	0.3	1	NFJDR	No
Cabin Creek	0.3	1	NFJDR	Spawning and Rearing
Little Wall Creek	0.2	1	Big Wall Creek	Spawning and Rearing
Bacon Creek	0.3	1	Little Wall Creek	Spawning and Rearing
Three-Trough Creek	0.1	1	Little Wall Creek	Spawning and Rearing
Cottonwood Creek	1.7	5	NFJDR	Spawning and Rearing
E. F. Cottonwood Creek	0.7	2	Cottonwood Creek	No
Board Creek	0.4	1	Cottonwood Creek	No
Cougar Creek	0.2	1	Cottonwood Creek	No
Cougar Creek trib	0.5	2	Cougar Creek	No
Squaw Creek	1.7	3	Cottonwood Creek	Spawning and Rearing
W. Fork Cochran Creek	0.6	1	Cochran Creek	No

Description of Ratings of Baseline Indicators for the North Fork John Day River

Water Temperature: This segment of the North Fork John Day River (NFJDR) is considered Winter Rearing Habitat only for steelhead. Data reveals that this segment has not meet State of Oregon criteria of 64 degrees F. This standard has been exceeded each year between 1986-95 at the river mouth. **Not Properly Functioning**

Sediment/Turbidity: There is no sediment data available for the NFJDR. Based on direct observation, turbidity is low to moderate. Professional judgement would rate condition as **At Risk**.

Chemical Contamination/Nutrients: No DEQ 303d listed reaches. Upstream agriculture influences is minor. **Properly Functioning**

Physical Barriers: There are no man-made barriers on the NFJDR. **Properly Functioning**

Substrate Embeddedness: There is no substrate embeddedness data available for the NFJDR. Professional judgement based on 1996 Riparian Photopoint studies would estimate cobble embeddedness between 20-30 percent. **At Risk**

Large Wood: There is no large wood data available for the NFJDR. Professional judgement would put it in the **Not Properly Functioning** category. This is due to the lack of instream wood observed.

Pool Frequency: There is no current pool frequency data available for the NFJDR. Professional judgement would rate it **Not Properly Functioning**. This is based on infrequent number of pools seen from direct observations.

Pool Quality: Based on direct observations, pools in the NFJDR generally are large and deep (>1 meter), but have moderate reductions of pool volume by fine sediment. Professional judgement would rate condition as **At Risk**.

Off-channel Habitat: Based on general lack of backwater areas observed, this category condition is **Not Properly Functioning**. Past management activities which damaged streambank stability and high flow events likely altered most natural off-channel habitats.

Refugia: Adequate habitat refugia does not exist on the NFJDR. With the current fragmented BLM ownership pattern on the river, even the most proactive restoration efforts are not going to supersede actions from many more private miles on the river. Riparian areas are not sufficient to buffer instream habitats from upstream actions that degrade habitat quality. These refugia are not of sufficient size, number and connectivity to maintain viable populations or sub-populations. **Not Properly Functioning**

Wetted Width/Max Depth Ratio: There is no current wetted width/max depth ratio data available for the NFJDR. Professional judgement would put it in the **Not Properly Functioning** category. This is based on direct observations and review of old stream survey data.

Streambank Condition: There is no current streambank condition data available for the NFJDR. Professional judgement from direct observation and review of 1996 photopoint studies would put it in the **At Risk** category. Bare cobble bars are common along the river, but fairly stable.

Floodplain Connectivity: Little historic data exists showing the extent of wetlands and the frequency of overbank flows to compare to current conditions. Professional judgement from direct observation and review of 1996 photopoint studies would put it in the **At Risk** category. Floodplains are likely seasonally inundated, but riparian vegetation is inadequate to capture/store waters long enough to develop wetland habitats.

Changes in Peak Flow/Base Flow: There is little to no flow data available for the NFJDR. Professional judgement would put it in the **Not Properly Functioning** category. This is due to the reduction of perennial grasses that has probably limited the ability of these watersheds to dissipate energy. The NFJDR above Monument has historically had heavy grazing use on the private lands. Until the early 1990s, grazing on the BLM lands was season long also. This can significantly increase the peak flows on these systems.

Drainage Network Increase: Increases of the drainage network are generally limited to road interaction with streams. Several river fords to access hillslope roads exist. Professional judgement would estimate condition as **At Risk**

Road Density and Location: Estimated average road densities for all BLM lands are 2-3 mi/mi², with one road following the NFJDR. Generally this road is outside of the riparian zone, and has little effect on the river. **At Risk**

Disturbance History: BLM forested tracts along the NFJDR have not had any significant timber harvest, so disturbance history (% ECA) is less than 15%. **Properly Functioning**

Riparian Reserves: To be able to answer this question an assessment of the potential of the different riparian sites would have to be made. At this time no such assessment has occurred on the public lands on these streams. **Not Applicable**

Description of Ratings of Baseline Indicators for the following tributaries of the NFJDR; Sulphur Gulch, Hunter, Potamus, Mallory, Graves, Squaw, Cabin, Little Wall, Bacon, Three-Trough, Cottonwood, E.F. Cottonwood, Board, Cougar, Cougar trib., Squaw, W. F. Cochran, Rudio, Gilmore, Straight, and Birch Creeks.

Water Temperature: Except for Rudio Creek, BLM has no monitoring data for these streams. Rudio Creek exceeded the criteria of 64°F with a maximum value of 67°F in 1994. Professional judgement would estimate that these streams are within 57-60 degrees F during spawning, but that nearly all exceed 64°F during summer rearing. **At Risk or Not Properly Functioning**

Sediment/Turbidity: There is no sediment data for these streams. From professional judgement and direct observations, this condition would be rated **At Risk**.

Chemical Contamination/Nutrients: No DEQ 303d reaches for chemical contamination. Water quality data available for Rudio Creek. Minor amounts of agriculture lands above these stream reaches. **Properly Functioning**

Physical Barriers: There are no known manmade barriers to steelhead migration on these streams. **Properly Functioning**

Substrate Embeddedness: No embeddedness measurements have been made, professional judgement from direct observations would rate this condition **At Risk**.

Large Wood: There is no large wood data available for these streams. Professional judgement from direct observations and review of riparian habitat inventories would rate this condition as **At Risk or Not Properly Functioning**. Most of these streams are within forested habitats and do have potential for large wood recruitment. Rudio Creek may be the exception to this rating, with ample amounts of instream wood, it is likely **Properly Functioning**.

Pool Frequency: There is no current pool frequency data available for these streams. Professional judgement from direct observations would rate these streams as **Not Properly Functioning**. This is because pool frequency standards are not currently being met.

Pool Quality: Pool quality would be considered **Functioning at Risk** on these streams. This rating based on direct observation of few pools deeper than 1 meter.

Off-Channel Habitat: No information is available to rate these streams. Based on direct observations, condition is rated **At Risk**.

Refugia: Based on professional judgement these stream segments (except Rudio Creek) are not of sufficient length, size, number and connectivity to maintain viable populations or sub-populations or serve as refugia. These segments generally are scattered among large portions of

private lands, and not connected to other contiguous stream segments on National Forest lands.
Not Properly Functioning

Wetted Width/Max Depth Ratio: There is no current width to depth ratio data available for these streams. Professional judgement would rate them **Not Properly Functioning**, because these stream channel types are not expected to have width/depth ratios less than 12.

Streambank Condition: Based on direct observations and review of riparian habitat inventories, most streams appear to be **At Risk**.

Floodplain Connectivity: Adjacent roads to these streams limits floodplain connectivity in areas. **At Risk**

Changes in Peak Flow/Base Flow: No long term flow data is available for these streams. Peak Crest Gauges have been monitored on Potamus, Mallory, and Cabin Creeks since the mid 1990s. Professional judgement would rate this as **At Risk**.

Drainage Network Increase: Increases of the drainage network are generally limited to road interaction with streams. Based on roads commonly adjacent to streams, and some stream fords, this condition is rated **At Risk**

Road Density and Location: Estimated average road densities are less than 3 mi/mi² with many valley bottom roads. **At Risk or Not Properly Functioning**

Disturbance History: Most BLM forested tracts have never been harvested, so past disturbance (% ECA) is less than 15%. **Properly Functioning**

Riparian Reserves: To be able to answer this question an assessment of the potential of the different riparian sites would have to be made. At this time no such assessment has occurred on the public lands on these streams. **Not Applicable**

Baseline Conditions for the Middle Fork John Day River Subbasin #17070203

Introduction

The Middle Fork John Day subbasin encompasses about 504,500 acres. Prineville District BLM manages about 3,975 acres within the subbasin, from the river mouth to the Malheur National Forest boundary (RM 43.1). Major tributaries within the subbasin include Clear, Granite Boulder, Camp, Big, and Long Creeks. Streams on this list generally carry perennial flows, based on U.S.G.S. Quadrangle maps or direct observations. (See Table 3).

Table 3. Streams with BLM ownership, total number of stream segments on BLM parcels, what it flows into, and current steelhead status.

Stream Name	Public Miles	# Of Stream Segments	Tributary to	Steelhead Waters
MF John Day R. (below HWY 395)	1.3	5	NFJDR	Winter Rearing
MF John Day R. (Above HWY 395)	0.8	5	NFJDR	Spawning and Rearing
Mosquito Creek	0.5	1	MFJDR	Spawning and Rearing
Huckleberry Creek	0.4	1	MFJDR	Spawning and Rearing
Slide Creek	1.0	1	MFJDR	Spawning and Rearing
Bum Creek	0.4	1	MFJDR	No
Long Creek	0.3	2	MFJDR	Spawning and Rearing
Jordan Creek	0.6	1	Long Creek	No
Cole Canyon	0.8	3	MFJDR	Spawning and Rearing
Troff Canyon	0.3	1	Cole Canyon	No
Threemile Creek	0.1	1	MFJDR	No

Description of Ratings of Baseline Indicators for the Middle Fork John Day River and tributaries including; Mosquito, Huckleberry, Slide, Bum, Long, Jordan, Cole Canyon, Troff Canyon, and Threemile Creeks.

Water Temperature: Except for the MF John Day, none of these stream segments have been monitored for temperature on BLM lands. The MFJDR (1993-96), Long Creek (1990-93), and Mosquito Creek (1991-92), all exceeded 64 F standard, and listed under DEQ 303d.. All other BLM stream segment likely exceed this summer rearing standard. Some may meet 57-60 F standard during spawning season, based on professional judgement. **Not Properly Functioning**

Sediment/Turbidity: There is no sediment data for these streams. From professional judgement and direct observations, this condition would be rated **At Risk**.

Chemical Contamination/Nutrients: The MFJDR (mouth to Crawford Creek) also is listed as a DEQ 303d reach for flow modification. Professional judgement would rate this category as **At Risk** due to high water temperatures that would affect dissolved oxygen levels.

Physical Barriers: There are no known manmade barriers to steelhead migration on these streams. **Properly Functioning**

Substrate Embeddedness: No embeddedness measurements have been made, professional judgement from direct observations would rate this condition **At Risk**.

Large Wood: There is no large wood data available for these streams. Professional judgement from direct observations and review of riparian habitat inventories would rate this condition as **At Risk or Not Properly Functioning**.

Pool Frequency: There is no current pool frequency data available for these streams. Professional judgement from direct observations would rate these streams as **Not Properly Functioning**. This is because pool frequency standards are not currently being met.

Pool Quality: Pool quality would be considered **Functioning at Risk** on these streams. This rating based on direct observation of few pools deeper than 1 meter.

Off-Channel Habitat: No information is available to rate these streams. Based on direct observations, condition is rated **Not Properly Functioning**.

Refugia: Based on professional judgement these stream segments are not of sufficient length, size, number and connectivity to maintain viable populations or sub-populations or serve as refugia. These segments are scattered among large portions of private lands, with little connectivity to other contiguous stream segments on National Forest lands. **Not Properly Functioning**

Wetted Width/Max Depth Ratio: There is no current width to depth ratio data available for these streams. Professional judgement would rate them **Not Properly Functioning**, because these stream channel types are not expected to have width/depth ratios less than 12.

Streambank Condition: Based on direct observations and review of riparian habitat inventories, most streams appear to be **At Risk**.

Floodplain Connectivity: From professional judgement and direct observations, this is rated **At Risk**. Historic data showing the extent of wetlands and the frequency of overbank flows to compare to current conditions is unknown.

Changes in Peak Flow/Base Flow: From review of riparian inventories, there is no evidence of peak flow/base flow changes on BLM stream segments. **Properly Functioning**

Drainage Network Increase: Increases of the drainage network are generally limited to road interaction with streams. Based on roads commonly adjacent to streams, this condition is rated **At Risk**

Road Density and Location: Estimated average road densities are 1-2.4 mi/mi² with many valley bottom roads. **At Risk or Not Properly Functioning**

Disturbance History: Most BLM forested tracts have never been harvested, so past disturbance (% ECA) is less than 15%. **Properly Functioning**

Riparian Reserves: To be able to answer this question an assessment of the potential of the different riparian sites would have to be made. At this time no such assessment has occurred on the public lands on these streams. **Not Applicable**

Baseline Conditions for the Lower John Day River Subbasin #17070204

Introduction

The Lower John Day subbasin encompasses about 2,011,000 acres. Prineville District BLM manages about 242,600 acres within the subbasin, from the river mouth to the confluence with the North Fork at Kimberly (RM 185). Major tributaries within the subbasin include Parrish, Kahler, Bridge, Pine, Butte, Thirty Mile, and Rock Creeks. Table 4 lists perennial, intermittent, and ephemeral drainages in this basin that are on public lands.

Table 4. - Stream miles of summer steelhead habitat within the Lower John Day Basin. Steelhead habitat was taken from the ODFW ORIS database (1994). Potential steelhead habitat was determined using professional judgement.

Amine Canyon	3.0	John Day River	Ephemeral	None
Armstrong Canyon	1.0	Thirtymile Creek	Ephemeral	None
Bear Creek	2.07	Bridge Creek	Perennial	Spawning/Rearing
Beef Hollow	1.0	John Day River	Ephemeral	None
Ben Glenn Canyon	1.25	John Day River	Ephemeral	None
Big Gulch	1.0	John Day River	Ephemeral	None
Black Canyon	3.0	Girds Creek	Ephemeral	None
Bologna Creek	0.3	John Day River	Perennial	Spawning/Rearing
Box Canyon	1.0	Thirtymile Creek	Ephemeral	None
Bridge Creek	12.75	John Day River	Perennial	Spawning/Rearing
Bruckert Canyon	0.1	John Day River	Ephemeral	None
Brush Canyon	0.25	Pine Hollow	Ephemeral	None
Buckskin Canyon	0.75	John Day River	Ephemeral	None
Bull Canyon	0.25	Willow Spring Canyon	Ephemeral	None
Button Hollow Creek	0.33	Parrish Creek	Ephemeral	None
Cherry Creek	0.25	John Day River	Intermittent	None
Chimney Springs Canyon	0.25	John Day River	Ephemeral	None
Chisholm Canyon	1.8	John Day River	Ephemeral	None
Clark Canyon	3.0	John Day River	Ephemeral	None
Cold Springs Canyon	0.5	Pine Hollow	Ephemeral	None
Combine Canyon	1.0	John Day River	Ephemeral	None

Condon Canyon	0.25	Thirtymile Creek	Intermittent	None
Corral Canyon	2.0	John Day River	Ephemeral	None
Corral Hollow	1.0	Hay Creek	Ephemeral	None
Cottonwood Canyon West	1	John Day River	Ephemeral	None
Cottonwood Canyon East	1.0	John Day River	Ephemeral	None
Coyote Canyon	3.0	Bridge Creek	Ephemeral	None
Currant Creek	1.5	Muddy Creek	Intermittent	None
Currie Canyon	1.5	Little Ferry Canyon	Intermittent	None
Dead Dog Canyon	1.75	John Day River	Ephemeral	None
Deep Canyon	1.0	John Day River	Ephemeral	None
Deer Horn Canyon	0.75	John Day River	Ephemeral	None
Devils Canyon Lower Trib	0.5	John Day River	Ephemeral	None
Devils Canyon Upper Trib	1.5	John Day River	Ephemeral	None
Dipping Vat Canyon	1	Little Ferry Canyon	Intermittent	None
Domogala Canyon	1.0	Cherry Creek	Ephemeral	None
Dry Creek	1.0	Cherry Creek	Ephemeral	None
Dry Creek	3.0	John Day River	Ephemeral	None
Dugout Canyon	0.5	John Day River	Intermittent/	None
Eagle Canyon	2.0	Hay Bottom Canyon	Ephemeral	None
East Bologna Creek	0.3	Bologna Creek	Perennial	None
East Little Pine Hollow	2.0	Little Pine Hollow	Ephemeral	None
Emigrant Canyon	0.7	John Day River	Ephemeral	None
Esau Canyon	2.5	John Day River	Intermittent	None
Fern Hollow	1.5	John Day River	Ephemeral	None
Ferry Canyon	2.26	John Day River	Intermittent	Spawning/Rearing
Flannery Gulch	0.75	Bear Creek	Intermittent	None
Gable Creek	3.5	Bridge Creek	Perennial	Spawning/Rearing
Girds Creek	2.12	John Day River	Intermittent	Potential Spawning/Rearing
Grass Valley Canyon	2.89	John Day River	Perennial	Spawning/Rearing
Harper Creek	0.1	John Day River	Intermittent	None
Hawley Canyon	0.25	Muddy Creek	Ephemeral	None

Hay Bottom Canyon	3.0	John Day River	Ephemeral	None
Hay Creek	0.25 + 3.5	John Day River	Perennial/Intermittent	Spawning/Rearing
Heidtmann Canyon	0.25	John Day River	Intermittent	None
Horseshoe Creek	0.18	John Day River	Perennial	Spawning/Rearing
Indian Hollow Creek	0.31	Parrish Creek	Perennial	None
Jackknife Canyon	6.99	John Day River	Intermittent	Spawning/Rearing
James Canyon	2.0	John Day River	Intermittent	None
John Day Gulch	3.25	John Day River	Ephemeral	None
John Day River	76.93	Columbia River	River/Perennial	Migratory
Juniper Canyon	0.75	Ferry Canyon	Ephemeral	None
Juniper Canyon Lower	0.5	John Day River	Ephemeral	None
Juniper Canyon Upper	0.25	John Day River	Ephemeral	None
Laurel Hollow Creek	0.33	Balm Hollow Creek	Intermittent	None
Left Hand Canyon	0.31	Parrish Creek	Perennial	None
Little Ferry Canyon	3.16	John Day River	Intermittent	Spawning/Rearing
Little Gulch	1.0	John Day River	Ephemeral	None
Lockwood Canyon	5.0	Pats Cabin Canyon	Ephemeral	None
Lone Juniper Canyon	0.5	Thirtymile Creek	Ephemeral	None
Long Hollow	3	John Day River	Intermittent	None
Masiker Creek	0.25	John Day River	Intermittent	None
Mathas Creek	0.1	John Day River	Intermittent	None
McGilvery Canyon	0.25	John Day River	Ephemeral	None
Meyers Canyon	3.0	Bridge Creek	Intermittent	None
Mud Creek	2.0	Gable Creek	Intermittent	None
Muddy Creek	0.5	John Day River	Perennial	Potential Spawning
Muleshoe Creek	0.25	John Day River	Ephemeral	None
Nelson Creek	1.0	Bridge Creek	Perennial	Potential Spawning
Owen Basin	1.0	John Day River	Ephemeral	None
Pats Cabin Canyon	4.0	Bridge Creek	Ephemeral	None
Pete Enyart Canyon	2.0	John Day River	Intermittent	None
Pine Hollow	4.5	John Day River	Intermittent	Spawning/Rearing

Post Gulch	0.25	Bear Creek	Ephemeral	None
Potlach Canyon	2.0	John Day River	Ephemeral	None
Rattlesnake Canyon	1.5	John Day River	Intermittent	None
Rhodes Canyon	1.6	John Day River	Intermittent	None
Richmond Canyon	.25	Thirtymile Creek	Ephemeral	None
Rock Canyon	0.75	John Day River	Ephemeral	None
Rock Creek	0.56	John Day River	Perennial	Migratory
Roland Canyon	0.25	John Day River	Ephemeral	None
Rosebaum Canyon	0.5	John Day River	Ephemeral	None
Rosebriar Canyon	0.25	Ferry Canyon	Ephemeral	None
Schott Canyon	0.75	Thirtymile Creek	Ephemeral	None
Scott Canyon	0.87	John Day River	Ephemeral	None
Service Creek	0.19	John Day River	Perennial	Spawning/Rearing
Shoofly Creek	0.3	John Day River	Intermittent	None
Sixmile Canyon	1.5	Hay Creek	Intermittent	None
Smith Canyon	2.0	John Day River	Ephemeral	None
Sorefoot Creek	3.41	John Day River	Perennial	None
South Fork	1.0	Pete Enyart Canyon	Ephemeral	None
Tap Horn Canyon	0.75	John Day River	Ephemeral	None
Thirtymile Creek	0.58	John Day River	Perennial	Migratory
Trail Canyon	2.0	John Day River	Ephemeral	None
Tucker Canyon	0.25	Thirtymile Creek	Ephemeral	None
Weddle Creek	2.0	Gable Creek	Ephemeral	None
West Bologna Creek	1.0	Bologna Creek	Perennial	None
White Rock Canyon	1.0	Cherry Creek	Ephemeral	None
Willow Spring Canyon	1.0	John Day River	Intermittent	None
Zigzag Canyon	0.5	John Day River	Ephemeral	None
Cow Canyon	0.5	John Day River	Ephemeral	None
Cason Canyon	1.0	Thirtymile Creek	Ephemeral	None
Rutledge Canyon	0.5	Jackknife Canyon	Ephemeral	None
Long Hollow	1.5	Pine Hollow	Intermittent	Spawning/Rearing

Description of Ratings of Baseline Indicators for perennial streams in the Lower John Day River below Kimberly. These include: Bear Creek, Bologna Creek, Bridge Creek, Currant Creek, East Bologna Creek, Gable Creek, Hay Creek, Horseshoe Creek, Indian Hollow Creek, Left Hand Canyon, Muddy Creek, Nelson Creek, Rock Creek, Service Creek, Shaw Canyon, Sorefoot Creek, Thirtymile Creek, and West Bologna Creek.

Water Temperature: Water temperature typically exceeds state DEQ water quality threshold of 64°. These streams provide a wide variety of habitat from migratory to spawning/rearing. **Not Properly Functioning**

Sediment/Turbidity: Sediment seems to be transported through these systems during high flows. Sediment buildup appears to be occurring in many stream segments associated with hydrophytic plant populations, especially willow species. Dominant substrate is gravel/cobble/sand. Early spring runoff produces moderate to high turbidity in these streams. **Not Properly Functioning**

Chemical Contamination/Nutrients: There are no known chemical contaminants in these areas. **Properly Functioning**

Physical Barriers: Cherry Creek has a structure near the stream's mouth, on private land, which appears to be a base flow barrier to fish movement. No other streams have known barriers. **At Risk**

Substrate: Substrate is dominated by gravel/cobble with fines. Embeddedness is moderately high with fine sediment evident within the stream channel. **At Risk**

Large Wood: Large wood in these perennial streams historically played a larger role in pool formation, stream shade, and streambank stability than currently. Historic land use practices have adversely affected new recruitments, flood events have physically removed mature trees (cottonwoods, alders, willows, birch, and other species), or segregated overstory trees from water tables as stream reaches experienced downcutting. With improving grazing practices, trees and shrubs are currently increasing along most of these reaches, but it will be years before large wood recruitment to stream channels occurs at a measurable rate. Based on direct observations, current condition is **Not Properly Functioning**

Pool Frequency: Pools frequencies standards are not met in these streams. Many of these stream reaches are improving in condition. As riparian conditions improve, pool frequencies are expected to increase. **Not Properly Functioning**

Pool Quality: Pool condition and quality is increasing in these stream areas. Increased bank stability, as well as large boulder/bedrock features provide for depth and cover in many areas. Condition is on an upward trend. **At Risk**

Off-Channel Habitat: Off channel habitats are being developed as these streams develop and rebuild floodplains. Beaver presence has also led to an increase in these habitats. **At Risk**

Refugia: Refugia are present in these areas with increasing frequency. As stream conditions continue to improve these areas will become more connected and functional. **At Risk**

Width/Depth Ratio: Increase in healthy riparian vegetation has led to a narrowing of the stream channels in most areas and therefore a decrease in the width to depth ratio. **At Risk**

Streambank Condition: Streambanks in many areas show evidence of downcutting. Changed grazing management on many areas of public land in the last 8 years has shown an increase in vegetation along the stream and a subsequent increase in floodplain area as well as sinuosity. Streambanks have improved with increases in riparian vegetation and root structure increase. Conditions are **Not Properly Functioning**

Floodplain Connectivity: Many of these streams have historically had significant down cutting of stream channels. Changes in grazing management have led to increased riparian vegetation, bank stability, and floodplain area. High flows have then led to a widening of stream bottom which has served to reestablish new floodplains in many areas. **At Risk**

Changes in Peak/Base Flows: Improvements in riparian vegetation and bank structure in recent years may be increasing base flows in some streams. This is still speculative, however. **At Risk**

Increases in Drainage Network: Roads have not increased the drainage network within the watershed. There has probably been some increase in sediment due to road placement, but the drainage network itself probably has not increased. **Properly Functioning**

Road Density and Location: Road densities are low, with some valley bottom roads. **At Risk**

Disturbance History: BLM timber harvest of forested parcels within the lower John Day Basin is minimal. **Properly Functioning/Not Applicable**

Riparian Reserves: To characterize this habitat indicator, an assessment of the potential riparian sites on public lands would have to be done. No such assessment has been made. Riparian areas within these stream areas are increasing in response to grazing management. Connectivity between high quality riparian areas is also increasing. **Not Applicable**

Description of Ratings of Baseline Indicators for intermittent drainages in the Lower John Day River below Kimberly. These include: Cherry Creek, East Little Pine Hollow, Ferry Canyon, Girds Creek, Grass Valley Canyon, Jackknife Canyon, Little Ferry Canyon, Pine Hollow, Rhodes Canyon, Long Hollow, and Shoofly Creek.

Generally streams within this category have very similar habitat components in varying amounts. These drainages are all characterized by similar habitat types including: seasonal/intermittent stretches of broad, channel, gravel/cobble substrate with little riparian vegetation, interspersed with areas of perennial stream usually associated with bedrock features, gravel/cobble substrate and presence of riparian vegetation. The difference in these types of habitat is typically the presence or absence of perennial reaches and residual pools where juvenile steelhead spend the summer.

Water Temperature: Water temperature typically exceeds state DEQ water quality threshold of 64° but does not exceed lethal limits for juvenile steelhead. This is due in large part to association between residual pools and water table. **Not Properly Functioning**

Sediment/Turbidity: Sediment seems to be transported through these systems during high flows. Sediment buildup does not appear to be occurring. **Properly Functioning**

Chemical Contamination/Nutrients: There are no known chemical contaminants in these areas. **Properly Functioning**

Physical Barriers: The physical barriers associated with these streams include the characteristic intermittent or ephemeral nature of the flow regime near the mouth of these tributaries. The lower section of these streams typically only flow during high spring runoff events, allowing a narrow margin for steelhead adults to move up into the drainage or juvenile steelhead to move downstream out of the basin. **At Risk**

Substrate: Substrate is dominated by gravel/cobble/boulder, and fines are not excessive in the substrate. **Properly Functioning**

Large Wood: Large wood in the Lower John Day River basin, with its narrow canyon walls and marked lack of recruitment trees, does not appear to have played a major role in channel formation and fisheries habitat. **Not Applicable**

Pool Frequency: Residual pools in perennial sections of these streams do not meet pool frequency standards. The nature of intermittent streams dictates that most scour pools will dry up, diminishing available rearing habitat. **Not Properly Functioning**

Pool Quality: Residual pools are in good condition, usually deep, and associated with cool ground water sources. **Properly Functioning**

Off-Channel Habitat: There are no residual off channel habitats within these areas, for most of the channel is dry. **Not Applicable**

Refugia: Refugia is limited to existing residual pool habitats within these streams. **Not Properly Functioning**

Width/Depth Ratio: There is a lack of wetted stream channel during rearing periods. Available rearing habitat is dominated by isolated residual pools or short reaches, that often are not linked by surface flows. **Not Applicable**

Streambank Condition: Areas with residual summer habitat are characterized by moister ground conditions and higher presence of hydrophytic plant species. **Properly Functioning**

Floodplain Connectivity: Professional judgement rates this indicator as **At Risk**, based on the lack to stability in these systems.

Changes in Peak/Base Flows: Improvements in riparian vegetation and bank structure in recent years may be increasing duration that these streams flow water into the summer. This is still speculative, however. **At Risk**

Increases in Drainage Network: Roads have not increased the drainage network within the watershed. Most roads created in the area follow drainages already. There has probably been some increase in sediment due to road placement, but the drainage network itself has not increased. **Properly Functioning**

Road Density and Location: Many roads within the basin are along drainage areas; however, there is a fairly low density of road within the area to begin with. **At Risk**

Disturbance History: BLM timber harvest of forested land parcels within the lower John Day Basin is minimal. **Properly Functioning/Not Applicable**

Riparian Reserves: To characterize this habitat indicator, an assessment of the potential riparian sites on public lands would have to be done. No such assessment has been made. **Not Applicable**

Description of Ratings of Baseline Indicators for the Mainstem Lower John Day River Corridor from Kimberly to the river mouth

Water Temperature: At mouth, summer values exceeded Oregon DEQ standard of 64°F each year between 1986-1995 with a maximum of 83°F. ODFW notes that water temperatures provide a sufficient thermal barrier in the lower river which discourages fish migration until water temperatures drop to suitable ranges typically beginning September to October. Fish therefore use this habitat as migratory only when temperatures coincide with tolerance levels. **Not Applicable or At Risk**

Sediment/Turbidity: The John Day River transports some volume of sediment every year. Consistent sources of sediment occur along the rivers edge including many agricultural fields which lose portions next to the river on a frequent basis. **At Risk**

Chemical Contamination/Nutrients: There are no known chemical contaminants in these areas. **Properly Functioning**

Physical Barriers: There are no physical barriers such as dams or falls within the section of the watershed. **Properly Functioning**

Substrate: There are sources of sediment within the basin; however, sediment buildup within the gravels of the stream channel is not a problem. The dominant substrate is cobble and gravel. There is no spawning or rearing habitat in this reach of the river. **Not Applicable**

Large Wood: Large wood in the Lower John Day River, with its narrow canyon walls and marked lack of recruitment trees, does not appear to have played a major role in channel formation and fisheries habitat. **Not Applicable**

Pool Frequency: Pools in river are associated with lateral scour and bends in the river corridor. **Properly Functioning**

Pool Quality: Lateral scour nature of mainstem pools maintains pools in a fairly static condition year to year. **Properly Functioning**

Off-Channel Habitat: This is a minor component for fish habitat within the lower river. Migrating steelhead key to the river thalweg, particularly juveniles. During summer months steelhead do not inhabit this lower mainstem section of the river. **Not Applicable**

Refugia: Migratory travel corridor habitat only **Not Applicable**

Width/Depth Ratio: The Lower John Day River is a system in which water volume fluctuates significantly from season to season. High flows in excess of 10,000 cfs regularly occur in winter to spring runoff times, while summer flows of less than 100 cfs occur in some stretches of the

lower river. The bank controlling factors for the lower river are predominantly steep canyon walls, interspersed with broader floodplain valleys. Width to Depth ratios are most likely consistent with standards given the channel controlling factors evident in the basin. **Properly Functioning**

Streambank Condition: The nature of the lower river is a narrow canyon between steep canyon walls interspersed with broader floodplain/agricultural areas. In many instances banks are composed of steep bedrock. Many other areas are characterized by large cobble/small boulder streambanks that are increasing with regard to willow presence and health. Most of the streambank within the lower basin are stable. However, areas associated with wide valley bottom and fine alluvium bank material show signs of erosion. **At Risk**

Floodplain Connectivity: The canyon topography of much of the lower river maintains a connection between floodplain and river channel. Areas characterized by broader floodplains are inundated only by the river in times of excessive flow. **At Risk**

Changes in Peak/Base Flows: Any changes to peak/base flows in the lower John Day River corridor, are likely the result of cumulative effects of land management practices within the entire drainage area. Gauging station data shows that since flows have been monitored on the Lower John Day River (1906-present), all flows over 25,000 CFS have occurred since 1965. Irrigation use alters base flows, most notably during the months of July-September. **At Risk**

Increases in Drainage Network: Roads near the river corridor are few and likely have not increased the drainage network. **Properly Functioning**

Road Density and Location: Access to the river corridor is very limited via road. **At Risk**

Disturbance History: The lower John Day River corridor is not suitable conifer forest habitat. **Not Applicable**

Riparian Reserves: An assessment of the potential of the various riparian sites has not been made in the lower basin. However, riparian areas in certain areas are recovering as witnessed by increases in hydrophytic vegetation especially willows. **Not Applicable**

Description of Ratings of Baseline Indicators for ephemeral drainages in the Lower John Day River below Kimberly. See Table 4 for canyon, hollow and gulch names.

Water Temperature: Water temperature in these types of systems has not been monitored. Water typically only flows during times of high or extreme runoff usually specific to individual storm events and locations. **Not Applicable**

Sediment/Turbidity: Sediment transport within these ephemeral draws and tributaries on a yearly basis across the basin is low. These areas only move water at extreme precipitation events and usually are highly localized. Sediment transport will occur at these times. Erosion is dependent on ground condition, these areas are typically not moist enough to allow hydrophytic plants to grow. These areas mimic upland areas in terms of management and condition. Many of these drainage flow downstream into migratory or non-presence areas with regard to steelhead habitat. **Properly Functioning**

Chemical Contamination/Nutrients: There are no known chemical contaminants in these areas. **Properly Functioning**

Physical Barriers: There is no fish habitat within these areas therefore physical barriers such as dams or falls within the section of the watershed are **Not Applicable**

Substrate: Drainage bottoms of this type do not support fish habitat, substrate is therefore **Not Applicable**

Large Wood: Large wood in the Lower John Day River basin, with its narrow canyon walls and marked lack of recruitment trees, does not appear to have played a major role in channel formation and fisheries habitat. **Not Applicable**

Pool Frequency: There are no residual habitats within these areas. **Not Applicable**

Pool Quality: There are no residual habitats within these areas. **Not Applicable**

Off-Channel Habitat: There are no residual habitats within these areas. **Not Applicable**

Refugia: There are no residual habitats within these areas. **Not Applicable**

Width/Depth Ratio: There are no residual habitats within these areas. **Not Applicable**

Streambank Condition: These areas mimic upland areas in terms of management and condition. **Not Applicable**

Floodplain Connectivity: The canyon topography of much of the lower river drainages maintains a strict connection between floodplain and channel. Since flows occur usually at flood

periods in these areas the drainage area is synonymous with the floodplain. **Properly Functioning/Not Applicable**

Changes in Peak/Base Flows: The nature of the lower section of the drainage, topography and seasonal conditions has not changed drastically over time. **Not Applicable**

Increases in Drainage Network: Roads have not increased the drainage network within the watershed. Most roads created in the area follow drainages already. There has probably been some increase in sediment due to road placement, but the drainage network itself has not increased. **Properly Functioning**

Road Density and Location: Many roads within the basin are along drainage areas; however, there is a fairly low density of road within the area to begin with. Access to the river corridor is very limited via road. **At Risk**

Disturbance History: BLM harvest of timbered land parcels within the lower John Day Basin is minimal. **Properly Functioning/Not Applicable**

Riparian Reserves: To characterize this habitat indicator, an assessment of the potential riparian sites on public lands would have to be done. No such assessment has been made. **Not Applicable**

C. Ongoing, Proposed and Interrelated and Independent Federal Actions

The following is a summary for the Prineville District BLM. Central Oregon Resource Area's activities that may affect steelhead trout or their habitat, and therefore submitted for consultation. These activities and associated decisions are proposed for Calendar year 2000.

Proposed Actions:

Range Allotments - There are 138 total allotments with grazing permits within the Upper Mainstem, Middle Fork, North Fork, and Lower Mainstem of the John Day River Basin which may affect steelhead trout. Of this total, 127 allotments are considered "Not Likely to Adversely Affect" and 11 allotments are considered "Likely to Adversely Affect" steelhead trout or its habitat. The primary reason for adverse determinations is because most BLM lands are low elevation areas, and spring grazing strategies (April-June) are the most conducive to maintaining and enhancing riparian conditions. However, this season of use causes potential interactions between grazing livestock and spawning/incubating steelhead trout, creating a potential for take.

A variety of grazing prescriptions are implemented in the Upper Mainstem, North Fork, and Middle Fork subbasins to maintain upland vegetation components. Grazing in pastures/allotments that contain riparian areas is generally limited to short spring treatments (2-8 weeks in April and May). Grazing treatments in large allotments that have many pastures, or higher elevation forested lands, may have livestock rotation systems. Here, grazing use in pastures without riparian areas typically will occur 2-8 weeks between May and September. Grazing on the upland pastures is managed to maintain and/or restore the upland vegetative component.

In the Lower John Day subbasin grazing varies from allotment to allotment; however, in most allotments public riparian areas along migratory corridors are grazed during spring, grazing in riparian areas with spawning and rearing is typically conducted in late fall and winter. Grazing in other upland areas without connection or influence on steelhead habitat are grazed at various times throughout the year.

Prescribed Burning - The BLM is proposing to continue with the prescribed burn program to burn approximately 10,000 acres annually within the John Day Basin, to recreate the natural process of vegetative succession. Modern fire suppression and recent fire management plans have greatly altered the natural fire regimes, and have changed vegetative species composition, diversity, and ecosystem structure of most of the Northwest. The majority of burns are rangeland sites in late or mid seral stage. The targeted vegetation for burning is mainly overstory big sagebrush and western juniper.

Monitoring of Projects in the John Day River Basin

The Prineville District will continue to monitor allotments and environmental conditions. This includes a wide array of monitoring and inventory including: allotment trend studies, utilization measurements, fish habitat monitoring/inventory, water temperature monitoring, streamflow measurement, cross section profiles, spawning surveys for anadromous fish, Rangeland Standards and Guidelines, and Implementation, Effectiveness and Validation monitoring as outlined by the Interagency Implementation Team.

E. Analysis of Effects

Range Allotments

There are 138 grazing allotments that will be analyzed because of their potential effects on steelhead trout. Since 1993, the Central Oregon Resource Area has been in the process of reviewing grazing allotments that contain anadromous fish habitat, writing Allotment Evaluations, and implementing adjusted grazing strategies (when necessary), rangeland improvements, and fences to promote recovery of riparian and fish habitat. At the time of the steelhead listing, not all grazing allotments had been evaluated yet.

About 25 grazing allotments will have interim grazing strategies prescribed on segregated BLM riparian segments in 2000. The interim grazing treatments are recommended to protect fishery habitat and facilitate riparian recovery on public riparian areas that previously had minimal BLM influence on grazing management (timing of grazing, or length of use). Typically the interim grazing prescriptions are spring use (1-2 months between 4/1-5/31) each year on lowland, non forested habitats, or 1-2 months of use between 5/1-9/1 each year on upland, forested habitats.

Long term grazing strategies need to be developed that include all private and public lands in each allotment (where practical, and upon coordination and agreement with grazing permit holders). BLM often is the minority land holder within pasture or allotment boundaries. Specific Grazing Allotment descriptions relevant to this biological assessment can be found in Appendix B. The following is the introduction and objectives used for the allotment evaluation process;

I. Background:

Following the listing of two anadromous Columbia River fish species (Snake River sockeye salmon, 1991 and Snake River chinook salmon, 1992) under the Endangered Species Act, the Northwest Power Planning Council (Council) amended the Columbia River Basin Fish and Wildlife Program (Program). A Comprehensive strategy for improving Columbia River salmon at every stage of their life cycle was needed. The revision of the Program was the result of over 20 meetings held by the Council with all affected interests. These meetings were sometimes referred to as "The Salmon Summit". The Program was amended and specific elements were published in 1992 as Volumes I and II, "Strategy for Salmon", by the Council. As a result, the Bureau was asked and agreed to review all livestock management plans for public lands that provide habitat for Columbia River anadromous fish. Wherever necessary each plan would be amended, updated and changed to meet the Council's habitat objectives, enhance riparian objectives and comply with State water quality standards.

The following goals and objectives are the guidelines used in evaluation of grazing allotments. Because of the low percentage of public land in the JDR basin (7 percent), the ability to fulfill many of these goals will depend on private landowners affecting management changes on their

lands. A comprehensive description of stated objectives may be found in their respective documents.

II. Land Use Goals and Objectives:

A. Basin Wide Goals (described by Interdisciplinary Team):

- 1) Meet State Water Quality Standards
- 2) Rehabilitate Watersheds for Native Flora and Fauna
- 3) Accommodate the Needs of Affected Interests

B. Northwest Power Planing Council Strategy for Salmon Objectives:

- 1) Limit the percentage of fine sediment (less than 6.4 millimeters in size) in steelhead and salmon redds to no more than 20% just prior to fry emergence relative to a control area.
- 2) Insure that there is no long term increase in sediment loading from management actions.
- 3) During spawning, water temperatures should range between 39 and 49 degrees Fahrenheit(°F).
- 4) During rearing, water temperatures should range between 45°F and 58°F.
- 5) Concentrations of dissolved oxygen shall not be less than 75% of saturation during the seasonal low level or less than 95% of saturation in spawning areas during spawning and fry development.
- 6) Allow no more than a 10% cumulative increase in natural stream turbidity as measured relative to a control point upstream.
- 7) pH of the water shall range between 6.5 and 8.5.
- 8) Concentrations of total dissolved solids shall not exceed 500 milligrams per liter relative to a control point upstream.
- 9) Limit fecal coliform to no more than 200 coliform per 100 millimeters of sample relative to a control point upstream.

- 10) Retain existing shade and increase shade of riparian vegetation, re-vegetate riparian areas.

C. State Water Quality Standards:

- 1) Dissolved Oxygen - concentrations shall not be less than 75% of saturation during the seasonal low level or less than 95% of saturation in spawning areas during spawning and fry development.
- 2) Temperature - the maximum seven-day running maximum temperature shall not exceed 64°F.
- 3) Turbidity - no more than a 10% cumulative increase in relative to a control point upstream.
- 4) pH - range between 6.5 and 8.5.

D₁. Two Rivers Resource Management Plan (1986) Goals and Objectives:

- 1) Maintain current livestock grazing levels and meet riparian and upland vegetation and management objectives.
- 2) Manage riparian areas along the John Day River and its major tributaries to full potential, with a minimum of 60% of the vegetative potential to be achieved within 20 years.
- 3) Provide forage to meet management objective numbers of ODFW for deer and elk. Manage upland vegetation to achieve maximum wildlife habitat diversity. Manage all streams with fisheries or fisheries potential to achieve a good to excellent aquatic habitat condition.
- 4) Designate areas with identified outstanding natural or cultural values as areas of critical environmental concern. Maintain or improve other unique wildlife ecological values.

D₂: John Day Resource Management Plan Record of Decision (1985) Goals and Objectives pertinent to grazing management:

- 1) Improve and maintain vegetative condition to benefit livestock and wildlife. Coordinate livestock use in riparian zones in order to protect water quality and enhance anadromous and other sport fisheries.

- 2) Enhance water quality and manage aquatic habitat with particular attention to those watersheds with major downstream uses including native anadromous species, other sports fisheries, and agriculture.

Habitat Management Techniques identified in the John Day RMP to help meet riparian habitat objectives when developing livestock grazing systems include:

- 1) Designing management activities in riparian zones that will maintain or, where possible, improve riparian habitat condition
- 2) Either eliminate hot season grazing (ie, grazing during the hottest part of summer), or schedule hot season grazing on a rotational basis.

Direct and Indirect Grazing Impacts on Steelhead

Impacts on the steelhead resource can be grouped into two categories: 1) those actions which have a direct impact to steelhead and 2) those actions which have an indirect impact to steelhead through direct impacts to habitat conditions. Direct impacts involve actions which affect individuals of the species in such a way to constitute 'Take'. With regard to grazing this category deals with livestock trampling of steelhead, eggs, fry, smolts or adults, and are typically discrete, short duration actions. Indirect impacts involve actions which lead to 'Take', typically concerns such as habitat alteration. These actions are usually additive, longer term, less intense actions which lead to significant changes in a species habitat, to the point that individuals of the species no longer function optimally when compared to more suitable conditions.

Concern over indirect impacts in the late 1980's and early 1990's led to the formulation of guidelines such as PACFISH to manage habitat for salmonid fish. Grazing strategies prior to the late 1980's often created indirect impacts to habitat which eventually led to a significant degradation of that habitat and effected the viability of steelhead populations. For example years of hot-season grazing (summer long or season long) led to over utilized rangelands and a disappearance of riparian species and riparian areas, increasing erosion, and water temperatures, which in turn decreased the suitability of these areas to salmonids. On the Prineville District in the early 1990's a large effort to rework grazing management strategies and institute science based grazing systems in order to eliminate long-term habitat deterioration and promote riparian recovery was launched. Season of use changes and restrictions were instituted, based on scientific knowledge which work with the phenology of key plant species in order to determine timing of grazing and lead to development of healthy riparian areas. Science based grazing strategies to promote riparian growth have been completed for most allotments within the John Day Basin. In general this was a shift from summer long hot season grazing to early spring grazing strategies.

However, while grazing strategies have been changed to provide for riparian growth, the shift to earlier season use primarily in March, April, May and June has increased the perceived potential

for direct impacts (i.e. trampling concerns). The spring season overlaps with steelhead spawning times within the John Day Basin and the concern becomes an issue of direct impacts from livestock on steelhead redds.

Ballard (Ballard, 1999) discusses the direct impacts of cattle on chinook salmon, a similar species to steelhead although times of year differ for the life histories. The study was conducted to determine the impacts and interactions between the species. Insights with regard to these reactions can be extrapolated to determine the potential for livestock/redd interactions over a given length of stream. Based on the stocking rate, stream length, acres grazed and redd density the study area had impacts to two redds over the course of two years amounting to a 16.72% trampling rate for redds, and on average one redd per year would be impacted. This study was conducted in the late summer when spring chinook spawning and water levels are typically at their lowest, and off-stream water is least available, making the stream channel a more attractive area to cattle. Even during this time the study showed cattle actually spent less than 1% of their time in direct contact with the aquatic habitat.

Based on the same relationship between factors of stocking rate, area grazed, stream miles and spawning density the values of trampling rate were calculate for all allotments which include spring grazing. Rates of trampling range from .01% to 14.74% with an average for all allotments of 1.89%. Translated into years of occurrence only 16 out of 83 allotments would be expected to see an impact to a redd more than once every 10 years. See Appendix D for a complete discussion and explanation of this analysis. In addition these values do not take into consideration that water levels are typically higher in the spring as opposed to late summer which tends to discourage cattle movement in the aquatic habitat, plus off-stream water is also more prevalent in the spring and therefore the need for cattle to encounter the aquatic habitat in order to drink is substantially less. Overall, given the differences in environment between the late summer and spring livestock encounters with the aquatic environment have a lower potential to actually occur, and therefore the potential to impact steelhead redds is much lower.

Throughout the analysis of individual allotments that follows, through using the best science available at this point for assessing the direct impacts of grazing on steelhead spawning areas, it was taken that any allotment for which the occurrence of trampling would, on average, occur less frequently than once in every 10 years the effects are taken to be Discountable. As outlined in the ESA Section 7 Consultation Handbook, discountable effects are 'those extremely unlikely to occur' and 'based on best judgement, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur'. The analysis of this effect, using the best science available, shows that these impacts will occur, however; the scale of these effects in most cases (less than once in five years) is difficult to detect, measure or evaluate and any attempt to quantify this effect based on direct monitoring would not be meaningful. Where this definition applies on allotment it is noted in the text.

Rational for Checklist Ratings of Effects for Population and Environmental Indicators (See Table 5) for Range Allotments on the following streams; Dads, Dixie, Standard, W. Fork Standard, Comer, Bull Run, Bear, Indian, W. Fork Little Indian, Pine, Bear Gulch, Grub, Little Pine, Canyon, Sheep Gulch, Hanscombe tributary, Beech, Capsuttle, McClellan, Big Canyon, West Birch, West Birch tributary, and East Birch Creeks.

The following allotments are included in this rating; 4016 Dixie, 4045 Bear Gulch, 4099 Indian, 4174 Reynolds Creek, 4047 Little Indian, 4141 Pine Creek, 4181 Dog Creek Ridge, 4056 Pointer, 4115 Canyon Mountain, 4107 Canyon Terrace, 4121 Airport, 4021 Poleline, 4102 Prospector, 4100 Bobcat, 4071 Round Top, 4118 Beech Creek, 4092 Little Beech Creek, 4002 Fall Creek, 4158 Fall Mountain, 4159 Miller Mountain, 4059 Cold Springs, 4077 Moon Mountain, 4006 Damon Creek, 4078 Gibson Hill, 4177 Clark Creek, 4109 Big Canyon Creek, and 2551 Clinton Harris. Information on these allotments can be found in Appendix B.

Water Temperature: According to Platts (1991), the ability of plants to control stream temperatures varies with their morphology. Grass crowns provide modest overhanging cover but grasses are too short to keep much solar radiation from reaching the water, except along very small streams (stream orders 1 and 2). Water temperatures will not be adversely affected from these grazing allotments because the timing of the use is when grasses and forbs are more palatable and preferable than shade producing shrubs and trees. With a spring use treatment on low elevation pastures, grazing in riparian areas is finished when enough soil moisture remains for nearly complete herbaceous regrowth. Regrowth will occur after short spring/summer use periods in higher elevation forested allotments too. This is because these areas receive more precipitation. This protects streambank stability and provides bank roughness to catch sediments during high flows. Although there is the possibility of a small reduction of the amount of shade due to plant removal and trampling, this effect will be insignificant and should not be measurable.

Sediment/Turbidity: These streams generally have low turbidity levels. Potentially a small amount of sediment could enter the streams when cattle are watering or during road maintenance activities. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should be insignificant and not degrade steelhead habitat.

Chemical Contamination/Turbidity: There is the possibility of increased bacteria counts due to grazing. However, the timing of grazing treatments, and restricted duration, help prevent cattle from concentrating use near riparian areas, as upland grasses are still green and palatable. Stream flows often are still elevated in April-June, diluting potential contaminants. No significant or measurable impact expected.

Physical Barriers: Grazing will not cause migration barriers:

Substrate Embeddedness: Potentially a small amount of sediment could enter the streams when

cattle are watering. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should not be significant enough to measurably increase substrate embeddedness above current levels.

Large Wood: Current grazing systems are established to protect riparian vegetation by utilizing the area at the time of year when woody vegetation is less palatable. Grazing will not limit development of future large wood to streams or affect current large wood sources potentially available to fall into streams.

Pool Frequency: Because grazing management strategies are not expected to adversely impact current or potential instream large wood, or streambank stability, no changes in pool frequencies is anticipated.

Pool Quality: Potential sediment inputs from livestock trampling is not expected to significantly affect pool quality, because of limited time that livestock have access to streams. Regrowth of riparian vegetation after grazing use will buffer the stream from overland sediment delivery.

Off-Channel Habitat: Off channel habitat should not be affected because grazing use is limited to seasons when upland vegetation is palatable, and use is not concentrated in riparian zones.

Refugia: Grazing management should not degrade spawning, rearing, and migratory habitat for steelhead and chinook. Grazing strategies are designed to protect riparian areas so no negative effects are expected.

Wetted Width/Max Depth Ratio: Livestock concentration/trampling along streams is minimized by these grazing treatments. Therefore, streambank damage, which causes and erosion and widening of stream channels, is not expected to occur.

Streambank Condition: Current grazing strategies are designed to minimize bank damage from trampling and the removal of vegetation. Regrowth of grasses occurs after spring grazing treatments. This protects streambank stability and provides bank roughness to catch sediments during high flows. Most streambanks have a high bank rock component that adds to bank stability. Grazing management will not significantly effect the stability of the streambanks.

Floodplain Connectivity: Grazing management will not effect floodplain function and connection to the stream during flood events. Wetland areas and riparian vegetation will be maintained.

Changes in Peak/Base Flow: Grazing activities are not likely to cause changes to flow regimes. This indicator is primarily affected by timber harvest activities which alter snow retention and snowmelt timing.

Drainage Network Increase: Grazing will not effect the drainage network.

Road Density and Location: Road densities will not change with grazing management.

Disturbance History: Disturbance history will not be effected by grazing management.

Riparian Reserves: As described in the environmental baseline section, no assessment of riparian potential has occurred. However, grazing systems were designed to protect and improve the riparian areas.

Table 5. Checklist for documenting environmental base line and effects of proposed actions on relevant indicators for Range Allotments on the following streams; Dads, Dixie, Standard, W. Fork Standard, Comer, Bull Run, Bear, Indian, W. Fork Little Indian, Pine, Bear Gulch, Grub, Little Pine, Canyon, Sheep Gulch, Hanscombe tributary, Beech, Capsuttle, McClellan, Big Canyon, West Birch, West Birch tributary, and East Birch Creeks.

PATHWAYS: INDICATORS	ENVIRONMENTAL BASELINE			EFFECTS OF THE ACTION(S)		
	Properly Functioning	At Risk	Not Properly Functioning	Restore	Maintain	Degrade
<u>Water Quality:</u> Temperature	X				X	
Sediment	X	X			X	
Chem. Contam./Nut.	X				X	
<u>Habitat Access:</u> Physical Barriers		X			X	
<u>Habitat Elements:</u> Substrate		X			X	
Large Woody Debris	X				X	
Pool Frequency			X		X	
Pool Quality	X	X			X	
Off-Channel Habitat	N/A				X	
Refugia	X	X			X	
<u>Channel Cond. & Dvn:</u> Width/Depth Ratio		X			X	
Streambank Cond.		X			X	
Floodplain Connectivity		X			X	
<u>Flow/Hydrology:</u> Peak/Base Flows		X			X	
Drainage Network Increase			X		X	
<u>Watershed Conditions:</u> Road Dens. & Loc.		X			X	
Disturbance History	X				X	
Riparian Reserves	N/A			N/A		

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments: 4016 Dixie, 4071 Round Top, 4045 Bear Gulch, 4056 Pointer and 4115 Canyon Mountain. These allotments contain the following streams: Little Pine Creek, Bear Gulch, Standard and Dixie Creeks.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is more than a negligible probability of take of proposed/listed anadromous salmonids. This is because grazing management is occurring during spawning and rearing of summer steelhead. Although it is a low probability, there is potential interactions between spawning and rearing fish, and cattle, when cattle are watering. This has the potential of harassing steelhead that are trying to spawn, and the displacement of summer steelhead into a more hostile environment. **Likely to Adversely Affect**

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments: 4099 Indian, 4047 Little Indian, 2551 Clinton Harris, 4174 Reynolds Creek, 4141 Pine Creek, 4181 Dog Creek Ridge, 4107 Canyon Terrace, 4121 Airport, 4021 Poleline, 4102 Prospector, 4100 Bobcat, 4118 Beech Creek, 4092 Little Beech Creek, 4002 Fall Creek, 4158 Fall Mountain, 4159 Miller Mountain, 4059 Cold Springs, 4077 Moon Mountain, 4006 Damon Creek, 4177 Clark Creek, 4078 Gibson Hill, and 4109 Big Canyon Creek. These allotments contain the following streams; Beech, Capsuttle, McClellan, Big Canyon, West Birch, West Birch tributary, East Birch, W. Fork Little Indian, Grub, Canyon, Hanscombe tributary, Dads, W. Fork Standard, Comer, Bull Run, Bear, Indian, Pine, and Sheep Gulch Creeks.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is less than a negligible probability of take of proposed/listed anadromous salmonids, or the effects are insignificant and discountable according to the discussion on page E4-E5. These grazing strategies were designed to improve riparian habitat and minimize livestock use along fish bearing streams. Potential interactions between spawning and rearing fish, and livestock, when cattle are watering is less than negligible. **Not Likely to Adversely Affect**

Rational for Checklist Ratings of Effects for Population and Environmental Indicators (See Table 6) for Range on Allotments for the streams: John Day River, Warrens, West Dry, Marks, Flat, Franks, Belshaw, Ferris, Sheep Gulch, Battle and tribs, Cottonwood, Dyke, Day, Rock and unnamed trib., Birch, Squaw, Indian, Frank, Buckhorn, Willow, Fopiano, Dick, Johnny, Bull Canyon, Deep, Harry, McGinnis, Branson, Bone, Rose, Spring, Holmes, Burnt Corral, Johnson, Hide and Seek, unnamed trib., and China Hat Creeks.

The following allotments are included in this rating; 4129 Belshaw, 2510 Andrew Barnard, 2663 Smith Hollow, 4062 Warrens Creek, 4086 Rudio Mountain, 4095 Fields Creek, 4172 Cummings Fork, 4023 Triple Fork, 4061 Scott Creek, 4066 Kidd Creek, 4038 Dayville, 4049 Battle Creek, 4163 Creek, 4076 Cottonwood Creek, 4128 Cummings Creek, 4151 Kinzua, 4060 Baker City Gulch, 4041 Franks Creek, 4065 E. Franks Creek, 4120 Ferris Creek, 4068 Sheep Gulch, 4007 Windy Point, 2642 Mascall, 2645 Clark, 4131 Day Creek, 2660 Rattlesnake Creek, 2559 Fopiano, 2639 Tubb Creek, 2558 Squaw Creek, 2501 Herb Asher, 2662 Johnson Creek, 4145 Two County, 4074 McCarty Creek, 4087 Blue Basin, 4001 Johnny Creek, and 4176 Dick Creek. Information on these allotments can be found in Appendix B.

Water Temperature: According to Platts (1991), the ability of plants to control stream temperatures varies with their morphology. Grass crowns provide modest overhanging cover but grasses are too short to keep much solar radiation from reaching the water, except along very small streams (stream orders 1 and 2). Water temperatures will not be adversely affected from these grazing allotments because the timing of the use is when grasses and forbs are more palatable and preferable than shade producing shrubs and trees. With a spring use treatment on low elevation pastures, grazing in riparian areas is finished when enough soil moisture remains for nearly complete herbaceous regrowth. Regrowth will occur after short spring/summer use periods in higher elevation forested allotments too. This is because these areas receive more precipitation. This protects streambank stability and provides bank roughness to catch sediments during high flows. Although there is the possibility of a small reduction of the amount of shade due to plant removal and trampling, this effect will be insignificant and should not be measurable.

Sediment/Turbidity: These streams generally have low to moderate turbidity levels. Potentially a small amount of sediment could enter the streams when cattle are watering. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should be insignificant and not degrade steelhead habitat.

Chemical Contamination/Turbidity: There is the possibility of increased bacteria counts due to grazing. However, the timing of grazing treatments, and restricted duration, help prevent cattle from concentrating use near riparian areas, as upland grasses are still green and palatable. Stream flows often are still elevated in April-June, diluting potential contaminants. No significant or measurable impact expected.

Physical Barriers: Grazing will not cause migration barriers:

Substrate Embeddedness: Potentially a small amount of sediment could enter the streams when cattle are watering. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should not be significant enough to measurably increase substrate embeddedness above current levels.

Large Wood: Current grazing systems are established to protect riparian vegetation by utilizing the area at the time of year when woody vegetation is less palatable. Grazing will not limit development of future large wood to streams or affect current large wood sources potentially available to fall into streams.

Pool Frequency: Because grazing management strategies are not expected to adversely impact current or potential instream large wood, or streambank stability, no changes in pool frequencies is anticipated.

Pool Quality: Potential sediment inputs from livestock trampling is not expected to significantly affect pool quality, because of limited time that livestock have access to streams. Regrowth of riparian vegetation after grazing use will buffer the stream from overland sediment delivery.

Off-Channel Habitat: Off channel habitat should not be affected because grazing use is limited to seasons when upland vegetation is palatable, and use is not concentrated in riparian zones.

Refugia: Grazing management should not degrade spawning, rearing, and migratory habitat for steelhead trout. Grazing strategies are designed to protect riparian areas so no adverse effects are expected.

Wetted Width/Max Depth Ratio: Livestock concentration/trampling along streams is minimized by these grazing treatments. Therefore, streambank damage, which causes and erosion and widening of stream channels, is not expected to occur.

Streambank Condition: Current grazing strategies are designed to minimize bank damage from trampling and the removal of vegetation. Regrowth of grasses occurs after spring grazing treatments. This protects streambank stability and provides bank roughness to catch sediments during high flows. Grazing management will not significantly effect the stability of the streambanks.

Floodplain Connectivity: Grazing management will not effect floodplain function and connection to the stream during flood events. Wetland areas and riparian vegetation will be maintained.

Changes in Peak/Base Flow: Grazing activities are not likely to cause changes to flow regimes.

Riparian Reserves: As described in the environmental baseline section, no assessment of riparian potential has occurred. However, grazing systems were designed to protect and improve riparian areas.

Table 6. Showing the checklist for documenting environmental base line and effects of proposed actions on relevant indicators for **range allotments on the following streams; John Day River, Warrens, West Dry, Marks, Flat, Franks, Belshaw, Ferris, Sheep Gulch, Battle and tribs, Cottonwood, Dyke, Day, Rock and unnamed trib., Birch, Squaw, Indian, Frank, Buckhorn, Willow, Fopiano, Dick, Johnny, Bull Canyon, Deep, Harry, McGinnis Branson, Bone, Rose, Spring, Holmes, Burnt Corral, Johnson, Hide and Seek, and China Hat Creeks.**

<u>PATHWAYS:</u> INDICATORS	ENVIRONMENTAL BASELINE			EFFECTS OF THE ACTION(S)		
	Properly Functioning	At Risk	Not Properly Functioning	Restore	Maintain	Degrade
<u>Water Quality:</u>			X		X	
Temperature						
Sediment		X			X	
Chem. Contam./Nut.	X	X			X	
<u>Habitat Access:</u>	X				X	
Physical Barriers						
<u>Habitat Elements:</u>		X	X		X	
Substrate						
Large Woody Debris			X		X	
Pool Frequency			X		X	
Pool Quality		X	X		X	
Off-Channel Habitat		X			X	
Refugia			X		X	
<u>Channel Cond. & Dyn:</u>			X		X	
Width/Depth Ratio						
Streambank Cond.		X			X	
Floodplain Connectivity		X			X	
<u>Flow/Hydrology:</u>		X			X	
Peak/Base Flows						
Drainage Network Increase		X			X	
<u>Watershed Conditions:</u>		X			X	
Road Dens. & Loc.						
Disturbance History	X				X	
Riparian Reserves	N/A				X	

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments: 2558 Squaw Creek, 4163 Creek, 4151 Kinzua, 4076 Cottonwood Creek, 2645 Clark, 2662 Johnson Creek and 2559 Fopiano. This allotment contains the following streams; Squaw, Johnson, Rudio, Gilmore, Willow, Cottonwood, Day, Fopiano, Franks and Buckhorn Creeks.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is more than a negligible probability of take of proposed/listed anadromous salmonids. This is because grazing management is occurring during spawning and rearing of summer steelhead. Although it is a low probability, there are potential interactions between spawning and rearing fish, and cattle, when cattle are watering. This has the potential of harassing steelhead that are trying to spawn, trampling of redds, and the displacement of fry into a more hostile environment. **Likely to Adversely Affect**

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments: 4145 Two County, 4041 Franks Creek, 4129 Belshaw, 4023 Triple Fork, 4061 Scott Creek, 4066 Kidd Creek, 4038 Dayville, 4049 Battle Creek, 4128 Cummings Creek, 4060 Baker City Gulch, 4065 E. Franks Creek, 4120 Ferris Creek, 4068 Sheep Gulch, 4007 Windy Point, 2642 Mascall, 4131 Day Creek, 2660 Rattlesnake Creek, 2510 Andrew Barnard, 2663 Smith Hollow, 4062 Warrens Creek, 4086 Rudio Mountain, 4095 Fields Creek, 4172 Cummings Fork, 2639 Tubb Creek, 2501 Herb Asher, 4074 McCarty Creek, 4087 Blue Basin, 4001 Johnny Creek, and 4176 Dick Creek. These allotments contain the following streams; John Day River, Dyke, Hide and Seek, unnamed trib., China Hat, Deep, Harry, McGinnis, Bone, Rose, Spring, Holmes, and Burnt Corral, Squaw, Franks, Warrens, West Dry, Marks, Flat, Belshaw, Ferris, Sheep Gulch, Battle and tribs, Rock and unnamed trib., Birch, Indian, Frank, Buckhorn, Dick, Johnny, Bull Canyon, and Branson Creeks.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is less than a negligible probability of take of proposed/listed anadromous salmonid, or the effects are insignificant and discountable according to the discussion on page E4-E5. These grazing strategies were designed to improve riparian habitat and minimize livestock use along fish bearing streams. Potential interactions between spawning and rearing fish, and livestock, when cattle are watering is less than negligible. **Not Likely to Adversely Affect**

Rational for Checklist Ratings for Population and Environmental Indicators (See Table 7) for Range Allotments on the South Fork John Day River and the following tributaries: Johnson, Smoky, Tunnel, Oliver, Young, Murderers, Cabin, Frazier, Martin, Cougar Gulch, Deer, Round, and Dugout Creeks.

This rating includes the following allotments: 4020 Murderers Creek, 4124 Smoky Creek, 4119 Black Canyon, 4103 Rockpile, 4164 Corral Gulch, and 4052 Big Baldy. Information on these allotments can be found in Appendix B.

Water Temperature: According to Platts (1991), the ability of plants to control stream temperatures varies with their morphology. Grass crowns provide modest overhanging cover but grasses are too short to keep much solar radiation from reaching the water, except along very small streams (stream orders 1 and 2). Water temperatures will not be adversely affected from these grazing allotments because the timing of use is when grasses and forbs are more palatable and preferable than shade producing shrubs and trees. With a spring use treatment on low elevation pastures, grazing in riparian areas is finished when enough soil moisture remains for nearly complete herbaceous regrowth. Regrowth will occur after short spring/summer use periods in higher elevation forested allotments too. This is because these areas receive more precipitation. This protects streambank stability and provides bank roughness to catch sediments during high flows. Although there is the possibility of a small reduction of the amount of shade due to plant removal and trampling, this effect will be insignificant and should not be measurable.

Sediment/Turbidity: These streams generally have moderate to high turbidity levels, particularly on the South Fork John Day River. Potentially a small amount of sediment could enter the streams when cattle are watering. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should be insignificant and not degrade steelhead habitat.

Chemical Contamination/Turbidity: There is the possibility of increased bacteria counts due to grazing. However, the timing of grazing treatments, and restricted duration, help prevent cattle from concentrating use near riparian areas, as upland grasses are still green and palatable. Stream flows often are still elevated in April-June, diluting potential contaminants. No significant or measurable impact expected.

Physical Barriers: Grazing will not cause migration barriers:

Substrate Embeddedness: Potentially a small amount of sediment could enter the streams when cattle are watering. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should not be significant enough to measurably increase substrate embeddedness above current levels.

Large Wood: Current grazing systems are established to protect riparian vegetation by utilizing the area at the time of year when woody vegetation is less palatable. Grazing will not limit development of future large wood to streams or affect current large wood sources potentially available to fall into streams.

Pool Frequency: Because grazing management strategies are not expected to adversely impact current or potential instream large wood, or streambank stability, no changes in pool frequencies is anticipated.

Pool Quality: Potential sediment inputs from livestock trampling is not expected to significantly affect pool quality, because of limited time that livestock have access to streams. Regrowth of riparian vegetation after grazing use will buffer the stream from overland sediment delivery.

Off-Channel Habitat: Off channel habitat should not be affected because grazing use is limited to seasons when upland vegetation is palatable, and use is not concentrated in riparian zones.

Refugia: Grazing management should not degrade spawning, rearing, and migratory habitat for steelhead trout. Grazing strategies are designed to protect riparian areas so no adverse effects are expected.

Wetted Width/Max Depth Ratio: Livestock concentration/trampling along streams is minimized by these grazing treatments. Therefore, streambank damage, which causes and erosion and widening of stream channels, is not expected to occur.

Streambank Condition: Current grazing strategies are designed to minimize bank damage from trampling and the removal of vegetation. Regrowth of grasses occurs after spring grazing treatments. This protects streambank stability and provides bank roughness to catch sediments during high flows. Grazing management will not significantly effect the stability of the streambanks.

Floodplain Connectivity: Grazing management will not effect floodplain function and connection to the stream during flood events. Wetland areas and riparian vegetation will be maintained.

Changes in Peak/Base Flow: Grazing activities are not likely to cause changes to flow regimes. This indicator is primarily affected by timber harvest activities which alter snow retention and snowmelt timing.

Drainage Network Increase: Grazing will not effect the drainage network.

Road Density and Location: Road densities will not change with grazing management.

Disturbance History: Disturbance history will not be effected by grazing management.

E20

Table 7. showing the checklist for documenting environmental base line and effects of **range allotments** on relevant indicators for following streams; **South Fork John Day River, Johnson, Smoky, Tunnel, Oliver, Young, Murderers, Cabin, Frazier, Martin, Cougar Gulch, Deer, Round, and Dugout Creeks.**

<u>PATHWAYS:</u> INDICATORS	ENVIRONMENTAL BASELINE			EFFECTS OF THE ACTION(S)		
	Properly Functioning	At Risk	Not Properly Functioning	Restore	Maintain	Degrade
<u>Water Quality:</u>		X			X	
Temperature						
Sediment			X		X	
Chem. Contam./Nut.	X				X	
<u>Habitat Access:</u>			X		X	
Physical Barriers						
<u>Habitat Elements:</u>			X		X	
Substrate						
Large Woody Debris			X		X	
Pool Frequency			X		X	
Pool Quality		X			X	
Off-Channel Habitat		X			X	
Refugia		X			X	
<u>Channel Cond. & Dvn:</u>		X			X	
Width/Depth Ratio						
Streambank Cond.	X				X	
Floodplain Connectivity		X			X	
<u>Flow/Hydrology:</u>		X			X	
Peak/Base Flows						
Drainage Network Increase		X			X	
<u>Watershed Conditions:</u>		X	X		X	
Road Dens. & Loc.						
Disturbance History	X				X	
Riparian Reserves	N/A			N/A		

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments; 4103 Rockpile, 4052 Big Baldy and 4020 Murderers Creek. These allotments contain the following streams; South Fork John Day River, Frazier, Martin, Murderers, Deer, Indian and Cougar Gulch Creeks.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is more than a negligible probability of take of proposed/listed anadromous salmonids. This is because grazing management is occurring during spawning and rearing of summer steelhead. Although it is a low probability, there are potential interactions between spawning and rearing fish, and cattle, when cattle are watering. This has the potential of harassing steelhead that are trying to spawn, trampling of redds, and the displacement of fry into a more hostile environment. **Likely to Adversely Affect**

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments: 4124 Smoky Creek, 4119 Black Canyon and 4164 Corral Gulch. These allotments contain the following streams; South Fork John Day River, Johnson, Smoky, Tunnel, Oliver, Young, Cabin, Round, and Dugout Creeks.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is less than a negligible probability of take of proposed/listed anadromous salmonids, or the effects are insignificant and discountable according to the discussion on page E4-E5. These grazing strategies were designed to improve riparian habitat and minimize livestock use along fish bearing streams. Potential interactions between spawning and rearing fish, and livestock, when cattle are watering is less than negligible. **Not Likely to Adversely Affect**

Rational for Checklist Ratings of Effects for Population and Environmental Indicators (See Table 8) for Range Allotments on the South Fork John Day River and tributaries:

Sunflower, Wildcat, Indian, Sock Hollow, Dry Soda, Abbott, Poison, Flat, Utley, Delles, Packwood, and Tamarack Creeks. *Streams in this list are upstream of a natural barrier to steelhead trout (Izee Falls on the SF John Day River), and are occupied by redband trout and non-game species only. Stream parcels on BLM lands are 0.1 to 30 riverine miles upstream of occupied steelhead habitat below Izee Falls.*

This rating contains the follow allotments; 4052 Big Baldy, 4186 Big Flats, 4110 Funny Butte, 4106 Izee, 4154 Morgan Creek, 4067 Sheep Creek Butte, 4104 South Fork, 4155 Blackhorse Draw. Information on these allotments can be found in Appendix B.

Water Temperature: According to Platts (1991), the ability of plants to control stream temperatures varies with their morphology. Grass crowns provide modest overhanging cover but grasses are too short to keep much solar radiation from reaching the water, except along very small streams (stream orders 1 and 2). Water temperatures to occupied steelhead habitats downstream will not be adversely affected from these grazing allotments, because the timing of use is when grasses and forbs are more palatable and preferable than shade producing shrubs and trees. With a spring use treatment on low elevation pastures, grazing in riparian areas is finished when enough soil moisture remains for nearly complete herbaceous regrowth. Regrowth will occur after short spring/summer use periods in higher elevation forested allotments too. This is because these areas receive more precipitation. This protects streambank stability and provides bank roughness to catch sediments during high flows. Although there is the possibility of a small reduction of the amount of shade due to plant removal and trampling, this effect will be insignificant and should not be measurable.

Sediment/Turbidity: These streams generally have moderate to high turbidity levels, particularly on the South Fork John Day River. Potentially small amounts of sediment could enter streams when cattle are watering. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should be insignificant and not degrade occupied steelhead habitat, which is 0-30 miles downstream in the SFJDR.

Chemical Contamination/Turbidity: There is the possibility of increased bacteria counts due to grazing. However, the timing of grazing treatments, and restricted duration, help prevent cattle from concentrating use near riparian areas, as upland grasses are still green and palatable. Stream flows in the SFJDR often are still elevated in April-June, diluting potential contaminants. No significant or measurable impact expected.

Physical Barriers: Grazing will not cause migration barriers:

Substrate Embeddedness: Potentially a small amount of sediment could enter the streams when

cattle are watering. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should not be significant enough to measurably increase substrate embeddedness to downstream steelhead habitats.

Large Wood: Current grazing systems will protect riparian vegetation by only using riparian areas when woody vegetation is less palatable. Grazing will not limit development of future large wood to streams or affect current large wood sources potentially available to fall into streams. Grazing will have no effect on instream large wood to downstream occupied habitats.

Pool Frequency: These stream segments are not accessible by steelhead trout. Not Applicable.

Pool Quality: These stream segments are not accessible by steelhead trout. Not Applicable.

Off-Channel Habitat: These stream segments are not accessible by steelhead trout. Not Applicable.

Refugia: These stream segments are not accessible by steelhead trout. Not Applicable.

Wetted Width/Max Depth Ratio: These stream segments are not accessible by steelhead trout. Not Applicable.

Streambank Condition: These stream segments are not accessible by steelhead trout. Not Applicable.

Floodplain Connectivity: These stream segments are not accessible by steelhead trout. Not Applicable.

Changes in Peak/Base Flow: These grazing activities are not likely to cause changes to flow regimes that could affect occupied steelhead habitat 0.1-30 miles downstream. This indicator is primarily affected by timber harvest activities which alter snow retention and snowmelt timing.

Drainage Network Increase: Grazing will not effect the drainage network.

Road Density and Location: Road densities will not change with grazing management.

Disturbance History: Disturbance history will not be affected by grazing management.

Riparian Reserves: As described in the environmental baseline section, no assessment of riparian potential has occurred. However, grazing systems were designed to protect and improve the riparian areas.

Table 8. Showing the checklist for documenting environmental base line and effects of **range allotments** on relevant indicators for following streams: **South Fork John Day River and tributaries; Sunflower, Wildcat, Indian, Sock Hollow, Dry Soda, Abbott, Poison, Flat, Utley, Delles, Packwood, and Tamarack Creeks.**

<u>PATHWAYS:</u> INDICATORS	ENVIRONMENTAL BASELINE			EFFECTS OF THE ACTION(S)		
	Properly Functioning	At Risk	Not Properly Functioning	Restore	Maintain	Degrade
<u>Water Quality:</u> Temperature	N/A				X	
Sediment		X	X		X	
Chem. Contam./Nut.		X			X	
<u>Habitat Access:</u> Physical Barriers	N/A				X	
<u>Habitat Elements:</u> Substrate		X	X		X	
Large Woody Debris			X		N/A	
Pool Frequency			X		N/A	
Pool Quality		X			N/A	
Off-Channel Habitat		X			NA	
Refugia	N/A				N/A	
<u>Channel Cond. & Dvn:</u> Width/Depth Ratio		X			N/A	
Streambank Cond.		X			N/A	
Floodplain Connectivity	X	X			N/A	
<u>Flow/Hydrology:</u> Peak/Base Flows		X			X	
Drainage Network Increase		X			X	
<u>Watershed Conditions:</u> Road Dens. & Loc.		X			X	
Disturbance History	X				X	
Riparian Reserves	N/A			N/A		

Answers to the Dichotomous Key For Making ESA Determination of Effects for Range Allotments on the South Fork John Day River and tributaries; Sunflower, Wildcat, Indian, Sock Hollow, Dry Soda, Abbott, Poison, Flat, Utley, Delles, Packwood, and Tamarack Creeks.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes, Summer Steelhead are downstream of these allotments in the S. Fork John Day River, below Izee Falls

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

No, these grazing allotments are not adjacent to occupied steelhead habitat. A natural barrier downstream prevents steelhead trout from accessing these streams. There is less than a negligible probability of take of proposed/listed anadromous salmonids. This is because grazing management on these streams is designed to maintain or improve riparian conditions. **Not Likely to Adversely Affect**

Rational for Checklist Ratings for Population and Environmental Indicators (See Table 9)
for Range Allotments on the North Fork John Day River *The North Fork John Day River corridor in this area supports winter rearing habitat for juvenile steelhead trout, and serves as a migration corridor. No spawning or summer rearing habitat exists in this reach of the river.*

This rating includes the following allotments; 4009 Birch Creek, 4035 Rim, 4012 River, 4083 19-20, 4028 Neal Butte, 4122 Big Bend, 4003 Slicear Mountain, 4042 Johnny Cake Mountain, 4029 North Fork, and 4125 Umatilla. Information on these allotments can be found in Appendix B.

Water Temperature: According to Platts (1991), the ability of plants to control stream temperatures varies with their morphology. Grass crowns provide modest overhanging cover but grasses are too short to keep much solar radiation from reaching the water, except along very small streams (stream orders 1 and 2). Water temperatures will not be adversely affected from these grazing allotments because the timing of use is when grasses and forbs are more palatable and preferable than shade producing shrubs and trees. With a spring use treatment on low elevation pastures, grazing in riparian areas is finished when enough soil moisture remains for nearly complete herbaceous regrowth. This protects streambank stability and provides bank roughness to catch sediments during high flows. Although there is the possibility of a small reduction of the amount of shade due to plant removal and trampling, this effect will be insignificant on streams as large as the mainstem NFJDR.

Sediment/Turbidity: The NFJDR generally has low to moderate turbidity levels. Potentially small amounts of sediment could enter the river when cattle are watering. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should be insignificant and not degrade steelhead winter rearing habitat.

Chemical Contamination/Turbidity: There is the possibility of increased bacteria counts due to grazing. However, the timing of grazing treatments, and restricted duration, help prevent cattle from concentrating use near riparian areas, as upland grasses are still green and palatable. Stream flows often are still elevated in April-June, diluting potential contaminants. No significant or measurable impact expected.

Physical Barriers: Grazing will not cause migration barriers:

Substrate Embeddedness: Potentially a small amount of sediment could enter the streams when cattle are watering. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should not be significant enough to measurably increase substrate embeddedness above current levels.

Large Wood: Current grazing systems are established to protect riparian vegetation by utilizing the area at the time of year when woody vegetation is less palatable. Grazing will not limit development of future large wood to streams or affect current large wood sources potentially available to fall into streams.

Pool Frequency: Because grazing management strategies are not expected to adversely impact current or potential instream large wood, or streambank stability, no changes in pool frequencies is anticipated.

Pool Quality: Potential sediment inputs from livestock trampling is not expected to significantly affect pool quality, because of limited time that livestock have access to the river. Regrowth of riparian vegetation after grazing use will buffer the stream from overland sediment delivery.

Off-Channel Habitat: Off channel habitat should not be affected because grazing use is limited to seasons when upland vegetation is palatable, and use is not concentrated in riparian zones.

Refugia: Grazing management should not degrade spawning, rearing, and migratory habitat for steelhead trout. Grazing strategies are designed to protect riparian areas so no adverse effects are expected.

Wetted Width/Max Depth Ratio: Livestock concentration/trampling along streams is minimized by these grazing treatments. Therefore, streambank damage, which causes and erosion and widening of stream channels, is not expected to occur.

Streambank Condition: Current grazing strategies are designed to minimize bank damage from trampling and the removal of vegetation. Regrowth of grasses occurs after spring grazing treatments. This protects streambank stability and provides bank roughness to catch sediments during high flows. Grazing management will not significantly effect the stability of the streambanks.

Floodplain Connectivity: Grazing management will not effect floodplain function and connection to the stream during flood events. Wetland areas and riparian vegetation will be maintained.

Changes in Peak/Base Flow: Grazing activities are not likely to cause changes to flow regimes. This indicator is primarily affected by timber harvest activities which alter snow retention and snowmelt timing.

Drainage Network Increase: Grazing will not effect the drainage network.

Road Density and Location: Road densities will not change with grazing management.

Table 9. Showing the checklist for documenting environmental base line and effects of the proposed on relevant indicators for **range allotments on the North Fork John Day River.**

<u>PATHWAYS:</u> INDICATORS	ENVIRONMENTAL BASELINE			EFFECTS OF THE ACTION(S)		
	Properly Functioning	At Risk	Not Properly Functioning	Restore	Maintain	Degrade
<u>Water Quality:</u> Temperature			X		X	
Sediment		X			X	
Chem. Contam./Nut.	X				X	
<u>Habitat Access:</u> Physical Barriers	X				X	
<u>Habitat Elements:</u> Substrate		X			X	
Large Woody Debris			X		X	
Pool Frequency			X		X	
Pool Quality		X			X	
Off-Channel Habitat			X		X	
Refugia			X		X	
<u>Channel Cond. & Dvn:</u> Width/Depth Ratio			X		X	
Streambank Cond.		X			X	
Floodplain Connectivity		X			X	
<u>Flow/Hydrology:</u> Peak/Base Flows			X		X	
Drainage Network Increase		X			X	
<u>Watershed Conditions:</u> Road Dens. & Loc.		X			X	
Disturbance History	X				X	
Riparian Reserves	N/A			N/A		

Answers to the Dichotomous Key For Making ESA Determination of Effects for the Range Allotments on the North Fork John Day River: 4042 Johnny Cake Mountain and 4029 North Fork.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes, Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is more than a negligible probability of take of proposed/listed anadromous salmonids. This is because grazing management is occurring during spawning and rearing of summer steelhead. Although it is a low probability, there are potential interactions between spawning and rearing fish, and cattle, when cattle are watering. This has the potential of harassing steelhead that are trying to spawn, trampling of redds, and the displacement of fry into a more hostile environment. **Likely to Adversely Affect**

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

No, there is less than a negligible probability of take of proposed/listed anadromous salmonids. Grazing activities on the North Fork John Day River are designed to protect riparian vegetation. Spawning activities do not occur in this reach of the river. **Not Likely to Adversely Affect**

Rational for Checklist Ratings for Population and Environmental Indicators (See Table 10) for Range Allotments on tributaries of the North Fork John Day River; Sulphur Gulch, Potamus, Mallory, Graves, Squaw, Cabin, Little Wall, Bacon, Three-Trough, Cottonwood, E.F. Cottonwood, Board, Cougar, Cougar trib., Big Wall, Squaw, W. F. Cochran, Rudio, Gilmore, Dry, Straight, and Birch Creeks.

This rating includes the following allotments: 4009 Birch Creek, 4050 Jinks Creek, 4113 Courthouse Rock, 4133 Vaughn, 4139 Bone Yard, 4167 Quarry, 4145 Two County, 4151 Kinzua, 4156 Rudio Creek, 4037 Juniper, 4025 Portugese, 4030 Powersite, 4094 Dry Corner, 4031 Coyote Field, 4069 Big Springs, 4112 Cottonwood Forks, 4085 Barber Pole, 4015 Mud Springs, 4108 Little Wall Creek, and 4022 Long Hollow. Information on these allotments can be found in Appendix B.

Water Temperature: According to Platts (1991), the ability of plants to control stream temperatures varies with their morphology. Grass crowns provide modest overhanging cover but grasses are too short to keep much solar radiation from reaching the water, except along very small streams (stream orders 1 and 2). Water temperatures will not be adversely affected from these grazing allotments because the timing of use is when grasses and forbs are more palatable and preferable than shade producing shrubs and trees. With a spring use treatment on low elevation pastures, grazing in riparian areas is finished when enough soil moisture remains for nearly complete herbaceous regrowth. Regrowth will occur after short spring/summer use periods in higher elevation forested allotments too. This is because these areas receive more precipitation. This protects streambank stability and provides bank roughness to catch sediments during high flows. Although there is the possibility of a small reduction of the amount of shade due to plant removal and trampling, this effect will be insignificant and should not be measurable.

Sediment/Turbidity: These streams generally have low to moderate turbidity levels. Potentially a small amount of sediment could enter the streams when cattle are watering. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should be insignificant and not degrade steelhead habitat.

Chemical Contamination/Turbidity: There is the possibility of increased bacteria counts due to grazing. However, the timing of grazing treatments, and restricted duration, help prevent cattle from concentrating use near riparian areas, as upland grasses are still green and palatable. Stream flows often are still elevated in April-June, diluting potential contaminants. No significant or measurable impact expected.

Physical Barriers: Grazing will not cause migration barriers:

Substrate Embeddedness: Potentially a small amount of sediment could enter the streams when

cattle are watering. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should not be significant enough to measurably increase substrate embeddedness above current levels.

Large Wood: Current grazing systems are established to protect riparian vegetation by utilizing the area at the time of year when woody vegetation is less palatable. Grazing will not limit development of future large wood to streams or affect current large wood sources potentially available to fall into streams.

Pool Frequency: Because grazing management strategies are not expected to adversely impact current or potential instream large wood, or streambank stability, no changes in pool frequencies is anticipated.

Pool Quality: Potential sediment inputs from livestock trampling is not expected to significantly affect pool quality, because of limited time that livestock have access to streams. Regrowth of riparian vegetation after grazing use will buffer the stream from overland sediment delivery.

Off-Channel Habitat: Off channel habitat should not be affected because grazing use is limited to seasons when upland vegetation is palatable, and use is not concentrated in riparian zones.

Refugia: Grazing management should not degrade spawning, rearing, and migratory habitat for steelhead trout. Grazing strategies are designed to protect riparian areas so no adverse effects are expected.

Wetted Width/Max Depth Ratio: Livestock concentration/trampling along streams is minimized by these grazing treatments. Therefore, streambank damage, which causes and erosion and widening of stream channels, is not expected to occur.

Streambank Condition: Current grazing strategies are designed to minimize bank damage from trampling and the removal of vegetation. Regrowth of grasses occurs after spring grazing treatments. This protects streambank stability and provides bank roughness to catch sediments during high flows. Grazing management will not significantly effect the stability of the streambanks.

Floodplain Connectivity: Grazing management will not effect floodplain function and connection to the stream during flood events. Wetland areas and riparian vegetation will be maintained.

Changes in Peak/Base Flow: Grazing activities are not likely to cause changes to flow regimes. This indicator is primarily affected by timber harvest activities which alter snow retention and snowmelt timing.

Drainage Network Increase: Grazing will not effect the drainage network.

Road Density and Location: Road densities will not change with grazing management.

Disturbance History: Disturbance history will not be effected by grazing management.

Riparian Reserves: As described in the environmental baseline section, no assessment of riparian potential has occurred. However, grazing systems were designed to improve riparian areas.

Riparian Reserves: As described in the environmental baseline section, no assessment of riparian potential has occurred. However, grazing systems were designed to improve riparian areas.

Table 10. Showing the checklist for documenting environmental base line and effects of the proposed on relevant indicators for range allotments on the following tributaries of the North Fork John Day River; Sulphur Gulch, Potamus, Mallory, Graves, Squaw, Cabin, Little Wall, Bacon, Three-Trough, Cottonwood, E.F. Cottonwood, Board, Cougar, Cougar trib., Squaw, W. F. Cochran, Rudio, Gilmore, Straight, and Birch Creeks.

PATHWAYS: INDICATORS	ENVIRONMENTAL BASELINE			EFFECTS OF THE ACTION(S)		
	Properly Functioning	At Risk	Not Properly Functioning	Restore	Maintain	Degrade
<u>Water Quality:</u>						
Temperature		X	X		X	
Sediment		X			X	
Chem. Contam./Nut.	X				X	
<u>Habitat Access:</u>	X				X	
Physical Barriers						
<u>Habitat Elements:</u>						
Substrate		X			X	
Large Woody Debris		X	X		X	
Pool Frequency			X		X	
Pool Quality		X			X	
Off-Channel Habitat		X			X	
Refugia			X		X	
<u>Channel Cond. & Dyn:</u>			X		X	
Width/Depth Ratio						
Streambank Cond.		X			X	
Floodplain Connectivity		X			X	
<u>Flow/Hydrology:</u>		X			X	
Peak/Base Flows						
Drainage Network Increase		X			X	
<u>Watershed Conditions:</u>		X	X		X	
Road Dens. & Loc.						
Disturbance History	X				X	
Riparian Reserves	N/A			N/A		

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments: 4108 Little Wall Creek and 4085 Barber Pole. These allotments contain the following streams: Little Wall Creek and Cottonwood Creek.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is more than a negligible probability of take of proposed/listed anadromous salmonids. This is because grazing management is occurring during spawning and rearing of summer steelhead. Although it is a low probability there is potential interactions between spawning and rearing fish, and cattle, when cattle are watering. This has the potential of harassing steelhead that are trying to spawn, trampling of redds, and the displacement of fry into a more hostile environment. **Likely to Adversely Affect**

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments: 4022 Long Hollow, 4151 Kinzua, 4145 Two County, 4112 Cottonwood Forks, 4015 Mud Springs, 4009 Birch Creek, 4156 Rudio Creek, 4037 Juniper, 4025 Portugese, 4030 Powersite, 4094 Dry Corner, 4050 Jinks Creek, 4113 Courthouse Rock, 4133 Vaughn, 4139 Bone Yard, 4167 Quarry, 4031 Coyote Field and 4069 Big Springs. These allotments contain the following tributaries to the North Fork John Day River; Sulphur Gulch, Potamus, Mallory, Graves, Squaw, Cabin, Little Wall, Bacon, Three-Trough, E.F. Cottonwood, Board, Cougar, Cougar trib., Squaw, W. F. Cochran, Rudio, Gilmore, Dry, Straight, and Birch Creeks.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes, Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is less than a negligible probability of take of proposed/listed anadromous salmonids, or the effects are insignificant and discountable according to the discussion on page E4-E5. These grazing strategies were designed to improve riparian habitat and minimize livestock use along fish bearing streams. Potential interactions between spawning and rearing fish, and livestock, when cattle are watering is less than negligible. **Not Likely to Adversely Affect**

Rational for Checklist Ratings for Population and Environmental Indicators (See Table 11) for Range Allotments on the Middle Fork John Day River and the following tributaries: Mosquito, Huckleberry, Slide, Bum, Long, Jordan, Cole Canyon, Troff Canyon, and Threemile Creeks.

This rating includes the following allotments; 4003 Slicear Mountain, 4014 Middle Fork, 4046 Threemile, 4134 Lookout, 4135 Gibson Creek, 4136 Baldwin Gulch, and 4184 Pass Creek. Information on these allotments can be found in Appendix B.

Water Temperature: According to Platts (1991), the ability of plants to control stream temperatures varies with their morphology. Grass crowns provide modest overhanging cover but grasses are too short to keep much solar radiation from reaching the water, except along very small streams (stream orders 1 and 2). Water temperatures will not be adversely affected from these grazing allotments because the timing of use is when grasses and forbs are more palatable and preferable than shade producing shrubs and trees. With a spring use treatment on low elevation pastures, grazing in riparian areas is finished when enough soil moisture remains for nearly complete herbaceous regrowth. This protects streambank stability and provides bank roughness to catch sediments during high flows. Although there is the possibility of a small reduction of the amount of shade due to plant removal and trampling, this effect will be insignificant and should not be measurable.

Sediment/Turbidity: These streams generally have low to moderate turbidity. Potentially a small amount of sediment could enter the streams when cattle are watering. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should be insignificant and not degrade steelhead habitat.

Chemical Contamination/Turbidity: There is the possibility of increased bacteria counts due to grazing. However, the timing of grazing treatments, and restricted duration, help prevent cattle from concentrating use near riparian areas, as upland grasses are still green and palatable. Stream flows often are still elevated in April-June, diluting potential contaminants. No significant or measurable impact expected.

Physical Barriers: Grazing will not cause migration barriers:

Substrate Embeddedness: Potentially a small amount of sediment could enter the streams when cattle are watering. Regrowth of vegetation after the short use period will recover most areas trampled by livestock, thus minimizing areas that could be subject to erosion during runoff or storm event flows. This amount of sediment should not be significant enough to measurably increase substrate embeddedness above current levels.

Large Wood: Current grazing systems are established to protect riparian vegetation by utilizing

the area at the time of year when woody vegetation is less palatable. Grazing will not limit development of future large wood to streams or affect current large wood sources potentially available to fall into streams.

Pool Frequency: Because grazing management strategies are not expected to adversely impact current or potential instream large wood, or streambank stability, no changes in pool frequencies is anticipated.

Pool Quality: Potential sediment inputs from livestock trampling is not expected to significantly affect pool quality, because of limited time that livestock have access to streams. Regrowth of riparian vegetation after grazing use will buffer the stream from overland sediment delivery.

Off-Channel Habitat: Off channel habitat should not be affected because grazing use is limited to seasons when upland vegetation is palatable, and use is not concentrated in riparian zones.

Refugia: Grazing management should not degrade spawning, rearing, and migratory habitat for steelhead trout. Grazing strategies are designed to protect riparian areas so no adverse effects are expected.

Wetted Width/Max Depth Ratio: Livestock concentration/trampling along streams is minimized by these grazing treatments. Therefore, streambank damage, which causes and erosion and widening of stream channels, is not expected to occur.

Streambank Condition: Current grazing strategies are designed to minimize bank damage from trampling and the removal of vegetation. Regrowth of grasses occurs after spring grazing treatments. This protects streambank stability and provides bank roughness to catch sediments during high flows. Grazing management will not significantly effect the stability of the streambanks.

Floodplain Connectivity: Grazing management will not effect floodplain function and connection to the stream during flood events. Wetland areas and riparian vegetation will be maintained.

Changes in Peak/Base Flow: Grazing activities are not likely to cause changes to flow regimes. This indicator is primarily affected by timber harvest activities which alter snow retention and snowmelt timing.

Drainage Network Increase: Grazing will not effect the drainage network.

Road Density and Location: Road densities will not change with grazing management.

Disturbance History: Disturbance history will not be effected by grazing management.

Riparian Reserves: As described in the environmental baseline section, no assessment of riparian potential has occurred. However, grazing systems were designed to improve riparian areas.

INDICATORS	ENVIRONMENTAL BASELINE			EFFECTS OF THE ACTION
	Property Functioning	At Risk	Not Property Functioning	
Water Quality: in streams and rivers				
Sediment		X		
Chemical Contaminants		X		
Biological Resources		X		
Shrubland		X		
Grassland		X		
Wetland		X		
Off-Campus Housing				
Highways				
Channel and A Bank				
Wetland				
Shrubland				
Floodplain Community				
Flow Hydrology				
Flow Rate				
Channel Network				
Channel				
Wetland Condition				
Flow Rate				
Channel				
Wetland				
Riparian Reserve				

Table 11. Showing the checklist for documenting environmental base line and effects of the proposed on relevant indicators for **range allotments on the Middle Fork John Day River and the following tributaries; Mosquito, Huckleberry, Slide, Bum, Long, Jordan, Cole Canyon, Troff Canyon, and Threemile Creeks.**

<u>PATHWAYS:</u> INDICATORS	ENVIRONMENTAL BASELINE			EFFECTS OF THE ACTION(S)		
	Properly Functioning	At Risk	Not Properly Functioning	Restore	Maintain	Degrade
<u>Water Quality:</u>			X		X	
Temperature						
Sediment		X			X	
Chem. Contam./Nut.		X			X	
<u>Habitat Access:</u>	X				X	
Physical Barriers						
<u>Habitat Elements:</u>		X			X	
Substrate						
Large Woody Debris		X	X		X	
Pool Frequency			X		X	
Pool Quality		X			X	
Off-Channel Habitat			X		X	
Refugia			X		X	
<u>Channel Cond. & Dvn:</u>			X		X	
Width/Depth Ratio						
Streambank Cond.		X			X	
Floodplain Connectivity		X			X	
<u>Flow/Hydrology:</u>	X				X	
Peak/Base Flows						
Drainage Network Increase		X			X	
<u>Watershed Conditions:</u>		X	X		X	
Road Dens. & Loc.						
Disturbance History	X				X	
Riparian Reserves	N/A			N/A		

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotment: 4046 Threemile, which contains portions on the Middle Fork John Day River and Long Creek.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is more than a negligible probability of take of proposed/listed anadromous salmonids. This is because grazing management is occurring during spawning and rearing of summer steelhead. Although it is a low probability there is potential interactions between spawning and rearing fish, and cattle, when cattle are watering. This has the potential of harassing steelhead that are trying to spawn, trampling of redds, and the displacement of fry into a more hostile environment. **Likely to Adversely Affect**

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments: 4003 Slicear Mountain, 4136 Baldwin Gulch , 4014 Middle Fork, 4134 Lookout, 4135 Gibson Creek, and 4184 Pass Creek. These allotments contain the following tributaries: the Middle Fork John Day River and the following tributaries; Mosquito, Huckleberry, Slide, Bum, Long, Jordan, Cole Canyon, Troff Canyon, and Threemile Creeks.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes, Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is less than a negligible probability of take of proposed/listed anadromous salmonids, or the effects are insignificant and discountable according to the discussion on page E4-E5. These grazing strategies were designed to improve riparian habitat and minimize livestock use along fish bearing streams. The MFJDR does not have suitable spawning habitat for steelhead. Potential spawning habitat in Huckleberry Creek is inaccessible to livestock because of dense woody vegetation. Potential interactions between spawning and rearing fish, and livestock, when cattle are watering is less than negligible. **Not Likely to Adversely Affect**

Rational for Checklist Ratings of Effects for Population and Environmental Indicators for Range Allotments with perennial streams in the Lower John Day River Basin.

The following allotments are included in this rating: 2512 Big Muddy, 2514 Black Rock Association, 2516 Gable Creek, 2518 Pine Creek, 2523 Kahler Creek, 2531 Circle Bar, 2533 Sutton Mountain, 2545 Cherry Creek, 2554 Charles Hill, 2563 Horseshoe Creek, 2565 Leroy A. Britt, 2584 Catherine Mauer, 2587 Corral Canyon, 2598 Hay Creek, 2608 Rattray, 2609 Crown Rock, 2611 Van Rietmann, 2613 Frank Robison, 2625 Stirewalt, 2626 Harper Mountain, 4093 West Bologna Creek. Actual grazing prescriptions and systems vary between these allotments. Most are grazed in early spring so as to enhance riparian production and recovery. A minor component are grazed in the hot season, which can stall maturation and vigor of riparian vegetation. This includes the Pine Creek Allotment (2518).

Water Temperature: According to Platts (1991), the ability of plants to control stream temperatures varies with their morphology. Grass crowns provide modest overhanging cover but grasses are too short to keep much solar radiation from reaching the water, except along very small streams (stream orders 1 and 2). Water temperatures will not be adversely affected from these grazing allotments because the timing of the use is when grasses and forbs are more palatable and preferable than shade producing shrubs and trees. With a spring use treatment on low elevation pastures, grazing in riparian areas is finished when enough soil moisture remains for nearly complete herbaceous regrowth. This protects streambank stability and provides bank roughness to catch sediments during high flows. Although there is the possibility of a small reduction of the amount of shade due to plant removal and trampling, this effect will be insignificant and should not be measurable. Extended hot season grazing will hinder recovery and maturation of riparian species, maintaining current conditions on degraded riparian areas. Plant removal and trampling will limit shade producing vegetation to mature.

Sediment/Turbidity: Early season grazing systems implemented along these perennial streams protect riparian vegetation during the growing season to allow for recovery and enhancement of riparian areas. Late season grazing systems do not protect riparian vegetation and may lead to reduction of riparian vegetation along streambanks. Reduction of streambank vegetation can serve to increase sediment production within the stream.

Chemical Contamination/Nutrients: There is a possibility of increased bacteria counts due to grazing. Early season grazing will mitigate this element due to high flows of water and riparian health and vigor. Late season grazing could increase this element due to lower flows, suppression of riparian vegetation maturation, and the extended time that livestock have access to perennial streams.

Physical Barriers: Grazing will not cause any physical barriers to fish within these allotments.

Substrate: Early season grazing may affect substrate composition and embeddedness slightly. Extended hot season grazing can keep streambanks in an unstable condition from livestock

trampling and vegetation removal. Active erosion of these streambanks will maintain an elevated supply of sediment to streams, reducing the likelihood of improvement to current embeddedness levels.

Large Wood: Current grazing systems are established to protect riparian vegetation by utilizing the area at the time of year when woody vegetation is less palatable. Grazing will not limit development of future large wood to streams or affect current large wood sources potentially available to fall into streams. Extended hot season grazing will limit growth and maturity of riparian trees, as upland forage become less palatable.

Pool Frequency: Early season grazing will protect riparian vegetation and bank stability and will not affect pool frequency. Extended hot season grazing likely will hinder improvements to riparian vegetation and streambank stability that are needed to facilitate pool formation.

Pool Quality: Early season grazing will protect riparian vegetation and bank stability and will not affect pool quality. Extended hot season grazing likely will hinder improvements to riparian vegetation and streambank stability that are needed to facilitate formation and maintenance of deep pools with adequate cover.

Off-Channel Habitat: Early season grazing will protect riparian vegetation and bank stability and will not affect off channel habitat. Extended hot season grazing likely will hinder improvements to riparian vegetation that are needed to facilitate off channel habitat formation.

Refugia: Early season grazing will protect riparian vegetation and bank stability and will not affect refugia. Extended hot season grazing likely will hinder improvements to riparian vegetation and streambank stability that are needed to facilitate formation and maintenance of suitable habitat refugia.

Width/Depth Ratio: Early season grazing will protect riparian vegetation and bank stability and will not affect width to depth ratios. Extended hot season grazing likely will hinder improvements to riparian vegetation and streambank stability. Condition of these habitat elements affects channel narrowing.

Streambank Condition: Early season grazing will protect riparian vegetation and bank stability and will not affect streambank condition. Extended hot season grazing likely will hinder improvements to riparian vegetation and streambank stability.

Floodplain Connectivity: Early season grazing will protect riparian vegetation and bank stability and will not affect floodplain connectivity. Extended hot season grazing likely will hinder improvements to riparian vegetation and streambank stability that are needed to maintain floodplain connectivity.

Changes in Peak/Base Flows: Early season grazing will protect riparian vegetation and bank

Riparian Reserves: As described in the environmental baseline section, no assessment of riparian potential has occurred.

Table 12. Checklist for documenting environmental baseline conditions, and effects on relevant indicators, from range allotments with perennial streams in the Lower John Day River Subbasin.

PATHWAYS: INDICATORS	ENVIRONMENTAL BASELINE			EFFECTS OF THE ACTION(S)		
	Properly Functioning	At Risk	Not Properly Functioning	Restore	Maintain	Degrade
<u>Water Quality:</u> Temperature			X		X	
Sediment			X		X	
Chem. Contam./Nut.	X				X	
<u>Habitat Access:</u> Physical Barriers		X			X	
<u>Habitat Elements:</u> Substrate		X			X	
Large Woody Debris			X		X	
Pool Frequency			X		X	
Pool Quality		X			X	
Off-Channel Habitat		X			X	
Refugia		X			X	
<u>Channel Cond. & Dyn:</u> Width/Depth Ratio		X			X	
Streambank Cond.			X		X	
Floodplain Connectivity		X			X	
<u>Flow/Hydrology:</u> Peak/Base Flows		X			X	
Drainage Network Increase	X				X	
<u>Watershed Conditions:</u> Road Dens. & Loc.		X			X	
Disturbance History	X				X	
Riparian Reserves	N/A				N/A	

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments with perennial streams in the Lower John Day River subbasin; 2518 Pine Creek, 2554 Charles Hill, 2608 Rattray, 2598 Hay Creek and 4093 West Bologna Creek. These allotments contain the following tributaries to the Lower John Day River; West Bologna, Pine, Hay, Thirtymile, Bologna and Long Hollow Creeks.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

Yes, the late season grazing allotment (#2518) has the potential to hinder attainment of key habitat parameters. most notably streambank stability, water temperature, and large wood.. The #2554 and #4093 allotment is not expected to hinder attainment of key habitat parameters.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is more than a negligible probability of take of proposed/listed anadromous salmonids. This is because grazing management is occurring during spawning and rearing of summer steelhead. Although it is a low probability there is potential interactions between spawning and rearing fish, and cattle, when cattle are watering. This has the potential of harassing steelhead that are trying to spawn, trampling of redds, and the displacement of fry into a more hostile environment. **Likely to Adversely Affect**

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments with perennial streams in the Lower John Day River subbasin; 2512 Big Muddy, 2514 Black Rock Association, 2609 Crown Rock, 2611 Van Rietmann, 2516 Gable Creek, 2518 Pine Creek, 2523 Kohler Creek, 2531 Circle Bar, 2533 Sutton Mountain, 2545 Cherry Creek, 2563 Horseshoe Creek, 2565 Leroy A. Britt, 2584 Catherine Mauer, 2587 Corral Canyon, 2613 Frank Robison, 2625 Stirewalt, 2626 Harper Mountain.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes, Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is less than a negligible probability of take of proposed/listed anadromous salmonids, or the effects are insignificant and discountable according to the discussion on page E4-E5. These grazing strategies were designed to improve riparian habitat and minimize livestock use along fish bearing streams. Potential interactions between spawning and rearing fish, and livestock, when cattle are watering is less than negligible. **Not Likely to Adversely Affect**

Rational for Checklist Ratings of Effects for Population and Environmental Indicators for Range Allotments on Intermittent Drainage in the Lower John Day River Basin.

The following allotments are included in this grouping: 2508 Bear Creek, 2524 Buck Hollow, 2525 Rock Creek, 2566 Justesen, 2509 Belshe, 2514 Black Rock Association, 2541 Eakin, 2547 Sixmile, 2561 Girds Creek, 2565 Leroy Britt, 2578 Logan, 2581 Elsie Martin, 2593 Verne A. Mobley, 2601 Nash, 2607 Pryor Farms, 2629 Tatum, 2631 Dipping Vat. Actual grazing prescriptions and systems vary between these allotments, as well as steelhead habitat. Most of these allotments are grazed in the winter and/or early spring so as to enhance riparian production and recovery. Some of these allotments contain known steelhead spawning and rearing habitat while the rest contain only spawning, migratory or no known habitat, these include: 2514 Black Rock Association (No Known Habitat(NKH)), 2541 Eakin (Spawning only), 2561 Girds Creek (NKH), 2565 Leroy Britt (NKH), 2581 Elsie Martin (NKH), 2629 Tatum (Migratory only), 2607 Pryor Farms (Potential spawning and rearing).

Water Temperature: These streams are all intermittent, leaving only residual pools in the summer season. These pools are associated with bedrock constrictions and exposures. Vegetation is recovering in these areas and offering more shade for pools. Winter/Spring grazing enhances this riparian recovery, as opposed to summer grazing. Water temperatures where measured typically exceed State Water Quality Standard of 64° F.

Sediment/Turbidity: These are typically low sediment systems with very low recruitment of fine sediment. In high flow events turbidity is high with suspended sediment in the water column, however these sediments are transported through the system.

Chemical Contamination/Nutrients: There is a possibility of increased bacteria counts due to grazing. Winter/Spring grazing will reduce this impact due to high flows of water and riparian health and vigor, and good distribution of livestock.

Physical Barriers: Grazing will not introduce any physical barriers to fish within these allotments.

Substrate: Winter/Spring grazing will not affect substrate composition or embeddedness, high flows and recovery of riparian vegetation increases buffer ability of stream.

Large Wood: Grazing will not effect large wood recruitment, or presence in streams.

Pool Frequency: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect pool frequency. Pool frequency is dependent on substrate, specifically bedrock outcrops.

Pool Quality: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect pool quality.

Off-Channel Habitat: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect off channel habitat.

Refugia: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect refugia.

Width/Depth Ratio: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect width to depth ratios.

Streambank Condition: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect streambank condition.

Floodplain Connectivity: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect floodplain connectivity.

Changes in Peak/Base Flows: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect flow regime. Flows in these streams is dependent on annual rainfall and storm events.

Increases in Drainage Network: Grazing management will not affect drainage network.

Road Density and Location: Grazing management will not affect road density and location.

Disturbance History: Grazing management will not affect disturbance history.

Riparian Reserves: Grazing management will not affect riparian reserve system.

Table 13. Checklist for documenting environmental baseline conditions and effects of **range allotments** on **intermittent streams in the Lower John Day River Subbasin** on relevant indicators.

<u>PATHWAYS:</u> INDICATORS	ENVIRONMENTAL BASELINE			EFFECTS OF THE ACTION(S)		
	Properly Functioning	At Risk	Not Properly Functioning	Restore	Maintain	Degrade
<u>Water Quality:</u> Temperature			X	X		
Sediment	X				X	
Chem. Contam./Nut.	X				X	
<u>Habitat Access:</u> Physical Barriers		X			X	
<u>Habitat Elements:</u> Substrate	X				X	
Large Woody Debris	N/A				X	
Pool Frequency			X		X	
Pool Quality	X				X	
Off-Channel Habitat	N/A				X	
Refugia			X		X	
<u>Channel Cond. & Dvn:</u> Width/Depth Ratio	N/A				X	
Streambank Cond.	X			X		
Floodplain Connectivity		X			X	
<u>Flow/Hydrology:</u> Peak/Base Flows		X			X	
Drainage Network Increase	X				X	
<u>Watershed Conditions:</u> Road Dens. & Loc.		X			X	
Disturbance History	X				X	
Riparian Reserves	N/A				X	

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments with intermittent streams in the Lower John Day River subbasin; 2581 Elsie Martin, 2509 Belshe, 2541 Eakin, 2547 Sixmile and 2607 Pryor Farms.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

Yes, hot season grazing in allotment #2581 and # 2607 has the potential to hinder attainment of key habitat parameters, most notably streambank stability, water temperature, and large wood.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

Summer long or hot season grazing in allotments with riparian areas is known to lead to detrimental long term impacts to salmonid habitat. Relevant indicators will suffer destruction/adverse modification on a long term basis. In addition early spring use on spawning and rearing habitat in allotments #2509, #2547 and #2541 has the potential to result in take.

Likely to Adversely Affect

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments with intermittent streams in the Lower John Day River subbasin; 2508 Bear Creek, 2524 Buck Hollow, 2525 Rock Creek, 2566 Justesen, 2514 Black Rock Association, 2561 Girds Creek, 2565 Leroy Britt, 2578 Logan, 2593 Verne A. Mobley, 2601 Nash, 2629 Tatum, and 2631 Dipping Vat.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes, Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is less than a negligible probability of take of proposed/listed anadromous salmonids, or the effects are insignificant and discountable according to the discussion on page E4-E5. These grazing strategies were designed to improve riparian habitat and minimize livestock use along fish bearing streams. Potential interactions between spawning and rearing fish, and livestock, when cattle are watering is less than negligible. **Not Likely to Adversely Affect**

Rational for Checklist Ratings of Effects for Population and Environmental Indicators for Range Allotments on in the Lower John Day River from Kimberly to the mouth.

The following allotments are included in this grouping: 2532 Tom Cole, 2535 Hayfield, 2544 Circle S. Ranch, 2556 Murray Howard, 2560 Baseline, 2577 Byrds Point, 2623 Steiwer Ranches, 2520 Smith Point.

Water Temperature: At the mouth, summer values in the mainstem typically exceed Oregon DEQ standard of 64°. Steelhead use of this segment is strictly migratory and is restricted to times (outside summer) when water temperatures are conducive to steelhead survival.

Sediment/Turbidity: This is a typically high sediment system with very low recruitment of fine sediment. In high flow events turbidity is high with suspended sediment in the water column, however these sediments are transported through the system.

Chemical Contamination/Nutrients: There is a possibility of increased bacteria counts due to grazing. Winter/Spring grazing will reduce this impact due to high flows of water and riparian health and vigor, and good distribution of livestock.

Physical Barriers: Grazing will not introduce any physical barriers to fish within these allotments.

Substrate: Grazing management will not affect substrate composition or embeddedness, high flows and recovery of riparian vegetation increases buffer ability of stream.

Large Wood: Grazing will not effect large wood recruitment, or presence in streams.

Pool Frequency: Grazing management will protect riparian vegetation and bank stability and will not affect pool frequency. Pool frequency is dependent on substrate, specifically bedrock outcrops.

Pool Quality: Grazing management will protect riparian vegetation and bank stability and will not affect pool quality.

Off-Channel Habitat: Grazing management will protect riparian vegetation and bank stability and will not affect off channel habitat.

Refugia: Grazing management will protect riparian vegetation and bank stability and will not affect refugia.

Width/Depth Ratio: Grazing management will protect riparian vegetation and bank stability and will not affect width to depth ratios.

Table 14. Checklist for documenting environmental baseline conditions and effects of **range allotments on intermittent streams in the Lower John Day River Subbasin** on relevant indicators.

<u>PATHWAYS:</u> INDICATORS	ENVIRONMENTAL BASELINE			EFFECTS OF THE ACTION(S)		
	Properly Functioning	At Risk	Not Properly Functioning	Restore	Maintain	Degrade
<u>Water Quality:</u> Temperature		X			X	
Sediment		X			X	
Chem. Contam./Nut.	X				X	
<u>Habitat Access:</u> Physical Barriers	X				X	
<u>Habitat Elements:</u> Substrate	N/A				X	
Large Woody Debris	N/A				X	
Pool Frequency	X				X	
Pool Quality	X				X	
Off-Channel Habitat	N/A				X	
Refugia	N/A				X	
<u>Channel Cond. & Dvn:</u> Width/Depth Ratio	X				X	
Streambank Cond.		X			X	
Floodplain Connectivity		X			X	
<u>Flow/Hydrology:</u> Peak/Base Flows		X			X	
Drainage Network Increase	X				X	
<u>Watershed Conditions:</u> Road Dens. & Loc.		X			X	
Disturbance History	N/A				X	
Riparian Reserves	N/A				X	

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Range Allotments along the Lower John Day River; 2532 Tom Cole, 2535 Hayfield, 2544 Circle S. Ranch, 2556 Murray Howard, 2560 Baseline, 2577 Byrds Point, 2623 Steiwer Ranches, 2520 Smith Point.

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is less than a negligible probability of take of proposed/listed anadromous salmonids. These grazing strategies were designed to improve riparian habitat and minimize livestock use along fish bearing streams. Potential interactions between spawning and rearing fish, and livestock, when cattle are watering is less than negligible. **Not Likely to Adversely Affect**

Unauthorized Grazing

As set forth in 43 CFR section 4140.1 of the BLM grazing regulations certain acts are prohibited on public lands. Some of these prohibited acts include certain grazing stipulations such as:

Allowing livestock or other privately owned or controlled animals to graze or be driven across these lands:

- (i) without a permit or lease, and annual grazing authorization.
- (ii) in violation of the terms and conditions of a permit, lease, or other grazing use authorization including, but not limited to, livestock in excess of the number authorized;
- (iii) in an area or at a time different from that authorized.

Typically non-compliance with these regulations is termed unauthorized use. Unauthorized use is a prohibited act with regard to management of the public lands. Prohibited acts fall under certain civil and criminal guidelines as outlined in various regulatory documents. These guidelines for unauthorized use are listed in Appendix E. These guidelines outline the procedures and processes for correctly rectifying infractions of the unauthorized use guidelines. Unauthorized use can not be predicted, expected or planned for. It is a violation of public land use guidelines. Monitoring of approved grazing guidelines and permit schedules, such as that done under the Implementation Monitoring Module designed by the PACFISH Inter-agency Implementation Team, is meant to ascertain infractions of this type of prohibited act and begin the process of rectifying the infraction. These guidelines (see Appendix E) are national in scope and origin and are not the purview of this district.

In rare occasions infractions of these prohibitions do impact the relevant environmental indicators as noted for critical steelhead habitat as defined by the National Marine Fisheries Service. When this occurs the BLM will reinitiate consultation regarding specific action in areas where the critical environmental indicators have been altered.

Prescribed Burning

The BLM is proposing to prescribe burn about 10,000 acres annually within the John Day Basin for the next 10 years, to recreate the natural process of vegetative succession. See Table 15 for proposed burn areas in 2000. Long term goals of this program are to:

- Restore the health and diversity of vegetation
- Control the spread of western juniper
- Reduce hazard fuels
- Improve decadent aspen communities
- Improve long-term hydrological regimes (water quality, flow, timing)
- Increase forage for wildlife and livestock

Prescribed burning is the planned application of fire to wildland fuels in their natural or modified state, under specific conditions of fuel, weather, and other variables to allow fire to achieve site specific resource management objectives. Prescribed burning can serve to improve soil conditions by reducing the amount of bare ground and increasing grass cover and organic matter. Gregory et al. (1991) states that under natural conditions, riparian plant communities have a high degree of structural and compositional diversity, reflecting the history of past disturbances such as floods, fire, wind, grazing, plant disease, and insect outbreaks.

Without periodic fire, species such as western juniper and sagebrush, increase in abundance under recent historical fire suppression methods. Research shows that expansion and increasing abundance of western juniper results in watershed degradation, which seriously affects productivity, water quantity and quality (Bedell et al, 1993). Sites occupied by juniper can release up to 1,600 lbs. per acre of sediment during rain storms or from the overland flow of melting snow. On semi-arid sites, water interception and use by western juniper causes a decline in forbs, grasses, and shrubs in the spaces between juniper canopies.

This increases bare mineral soil in juniper-dominated watersheds (Bedell et al, 1993).

All burn units proposed for treatment would be evaluated for special resource needs (including Threatened or Endangered species habitat) and mitigating measures would be covered in the burn plan to ensure project objectives can be met, or the unit will be dropped from consideration. Some mitigation measures that will be considered in the development of the burn plans are:

Burn primarily in late summer or fall when most vegetation is dormant. Winter and spring burning may be done if needed to achieve objectives.

Mimic the natural historical fire regime. Burn in a mosaic pattern with irregular boundaries to create diversity and maximum edge effect to ensure adequate wildlife cover.

Use existing roads, trails or other natural fuel breaks to contain the prescribed fire.

Avoid allowing prescribed fire to enter the riparian zone of influence along perennial or fish bearing streams

Treatments would primarily occur on sagebrush-juniper plant associations, but may include ponderosa pine, aspen, and riparian sites. Prescription burn temperatures are not expected to exceed 500 degrees F. Following treatment, units will be monitored to determine the project's effectiveness, fire effects, and recovery rates using photo-point references, plots, and individual observations. Firing methods will be specific to each proposed unit and could include combinations of hand-held drip torches, heli-torches, ping-pong balls, and fuzes. In the event that a unit is selected without existing firelines present, fireline would be constructed from a combination of roads, handline, and blackline in a efficient manner that protects natural resources. All roads/line constructed would be rehabilitated using waterbars, and native seed mixes following completion of the burn.

Table 15: Proposed Prescribed Burn Units for Fiscal Year 2000 in the John Day Basin

Name	Location	Acres to Burn
Sutton Mountain	Sutton Mountain/Mitchell	5000 acres
Total Acres to burn		5000 acres

Rational for Checklist Ratings of Effects for Population and Environmental Indicators for Prescribed Burning in the John Day Basin

Water Temperature: Water temperatures would not be affected by this action. The riparian zone of influence adjacent to all perennial streams (fish-bearing or non fish-bearing) will be avoided from burning activities, by all reasonable methods.

Sediment/Turbidity: Minor impacts to sediment levels in perennial streams is expected. This would be a temporary condition until burned areas regrow. Intact vegetation in riparian areas will effectively filter most sediments mobilized from upland burned areas. The important aspects of post-fire hydrology are typically water retention and water quality. High intensity burns associated with wildfires can result in hydrophobic soil conditions which may decrease infiltration and absorption rates and limit water retention capacities. The effects of non-wettable soil layers are primarily the same as any dense or hard pan soil layer that restricts water movement through the soil, and often result in an increase in overland flows and surface erosion. Prescribed burns are primarily lower intensity and are designed to minimize hydrophobicity.

Chemical Contamination/Nutrients: This indicator will not be affected significantly, since prescribed burns minimize the volatilization of nutrients like nitrogen because of lower burn intensities.

Physical Barriers: This activity will not cause migration barriers.

Substrate Embeddedness: This indicator is not expected to be adversely affected for the same reasons discussed under Sediment/Turbidity. Riparian vegetation will also minimize any sediment delivery to the stream which could increase substrate embeddedness.

Large Wood: Large wood would not be affected by this action. The riparian zone of influence adjacent to all perennial streams (fish-bearing or non fish-bearing) will be avoided from burning activities. Effects to future or current levels of instream large wood would be minimal.

Pool Frequency: No adverse effects to pool frequencies are expected because activities within RCA's will be avoided.

Pool Quality: No adverse effects to pool quality are expected because activities within RCA's will be avoided.

Off-Channel Habitat: No adverse effects to off-channel habitats are expected because activities within RCA's will be avoided.

Refugia: No adverse effects to riparian reserves are expected because activities within RCA's will be avoided.

Wetted Width/Max Depth Ratio: No adverse effects to width to depth ratios are expected because activities within RCA's will be avoided.

Streambank Condition: No adverse effects to streambank conditions are expected because activities within RCA's will be avoided.

Floodplain Connectivity: No adverse effects to floodplain connectivity are expected because activities within RCA's will be avoided. Wetland areas and riparian vegetation will be maintained.

Changes in Peak/Base Flow: No adverse effects to Peak/Base flows are expected for rationale described under Sediment/Turbidity.

Drainage Network Increase: Minor changes are expected to the drainage network, until burned areas experience regrowth of vegetation. Subsequent regrowth is expected to be denser in the future, minimizing drainage networks in the future.

Road Density and Location: Road densities could increase slightly on a temporary basis, until fireline roads are revegetated from seeding, following the burn.

Disturbance History: Disturbance history (% ECA) will not be effected by this action, because no timber harvest is prescribed in this activity.

Riparian Reserves: As described in the environmental baseline section, no assessment of riparian potential has occurred. However, this activity will have no effect on riparian vegetation communities, for reasons described under Water Temperature.

Answers to the Dichotomous Key For Making ESA Determination of Effects for Prescribed Burning in the John Day Basin;

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes, Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the proposed burn activities are outside of the riparian zone of influence. The nature of low intensity, prescribed burn strategies minimize off site soil erosion and sediment delivery to stream channels.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is a negligible (extremely low) probability of take of proposed/listed anadromous salmonids or destruction/adverse modification of habitat. Implementing mitigation measures discussed above should adequately protect water quality, channel stability, riparian vegetation communities and watershed conditions. **Not likely to adversely affect**

F. Combined Effects

Combined Effects of Prineville District BLM actions for population and Environmental Indicators for the Upper Main, North Fork, Middle Fork, and Lower John Day River Subbasins (See Table 1).

Water Temperature: Removal of riparian vegetation by livestock grazing with spring or short season treatments is temporary, until regrowth occurs, and effects mainly grasses and forbs. These actions are not expected to produce a negative effect on water temperatures for steelhead. Overall guidelines in place are designed to protect riparian vegetation which will maintain or improve water temperatures.

Sediment/Turbidity: Potentially a small amount of sediment could enter spawning/rearing stream reaches due to grazing. Due to guidelines in place to protect vegetation, this amount of sediment should be insignificant and not degrade steelhead habitat. Grazing systems are designed to leave residual ground cover that will minimize the amount of sediment entering the system.

Chemical Contamination/Turbidity: Water chemistry should not be impacted by federal actions due to the fact that grazing systems are designed to protect and allow the recovery of water quality.

Physical Barriers: No BLM actions should be causing migration barriers for steelhead.

Substrate Embeddedness: Potentially a small amount of fine sediment could enter the system due to grazing management. These programs are designed to minimize/prevent fine sediment from entering streams.

Large Wood: Grazing systems are designed to minimize utilization on developing trees and shrubs by using riparian pastures during seasons when upland and floodplain grasses are more palatable than woody vegetation.

Pool Frequency: Grazing systems are designed to protect and improve streambank stability and riparian vegetation. Stable, vegetated streambanks and instream large wood are important factors in the development and maintenance of high quality pool habitats. Riparian vegetation is prevented from establishing in isolated areas due to road maintenance. These areas are scattered and minor and not expected to adversely affect the frequency of deep pools.

Pool Quality: Grazing systems are designed to protect and improve streambank stability and riparian vegetation. Stable, vegetated streambanks and instream large wood are important factors in the development and maintenance of high quality pool habitats. Riparian vegetation is prevented from establishing in isolated areas due to road maintenance. These areas are scattered and minor and not expected to adversely affect the frequency of deep pools.

Off-Channel Habitat: Grazing systems are designed to protect and improve streambank stability and riparian vegetation. Stable, vegetated streambanks and instream large wood are important factors in the development and maintenance of off-channel habitats.

Refugia: Ongoing actions are designed to protect fisheries habitat and limit the disturbance to the population.

Wetted Width/Max Depth Ratio: Grazing systems are designed to protect and improve streambank stability and riparian vegetation. Stable, vegetated streambanks and instream large wood are important factors in maintaining appropriate channel widths for each respective stream channel type.

Streambank Condition: Grazing systems are designed to protect and improve streambank stability and riparian vegetation. Well vegetated streambanks and instream large wood are important factors in maintaining good streambank conditions. Temporary minor bank damage does occur from grazing, but regrowth of vegetation protects against erosion during high flow events. Cumulatively this should not have a significant affect to steelhead habitat.

Floodplain Connectivity: All actions are designed to protect/enhance floodplain connectivity. No detrimental effects to steelhead habitat are expected.

Changes in Peak/Base Flow: Actions are designed to recover these systems to their historic flow regimes or maintain current conditions.

Drainage Network Increase: The cumulative affects on the actions should not significantly change the drainage network..

Road Density and Location: Road densities will increase very slightly in the basin, but only on a temporary basis.

Disturbance History: Disturbance history will not be adversely affected by any of the actions.

Riparian Reserves: As described in the environmental baseline section, no assessment of riparian potential has occurred. However, all actions are design to minimize affects to the riparian areas.

Table 1. Showing the checklist for documenting **combined effects for BLM actions** on relevant indicators for the **Upper Main, North Fork, Middle Fork, and Lower John Day River Subbasins**

<u>PATHWAYS:</u>	COMBINED EFFECTS OF THE ACTIONS		
INDICATORS	Restore	Maintain	Degrade
<u>Water Quality:</u>		X	
Temperature			
Sediment		X	
Chem. Contam./Nut.		X	
<u>Habitat Access:</u>	X		
Physical Barriers			
<u>Habitat Elements:</u>		X	
Substrate			
Large Woody Debris		X	
Pool Frequency		X	
Pool Quality		X	
Off-Channel Habitat		X	
Refugia		X	
<u>Channel Cond. & Dyn:</u>		X	
Width/Depth Ratio			
Streambank Cond.		X	
Floodplain Connectivity		X	
<u>Flow/Hydrology:</u>		X	
Peak/Base Flows			
Drainage Network Increase		X	
<u>Watershed Conditions:</u>		X	
Road Dens. & Loc.			
Disturbance History		X	
Riparian Reserves	N/A		

Determinations of effects for the Cumulative Effects of BLM actions on the Upper Main, North Fork, Middle Fork, and Lower John Day River Subbasins

BLM actions in these subbasins of the John Day River are comprised of grazing management that was rated as Likely to Adversely Affect, grazing management that was rated as Not Likely to Adversely Affect, prescribed burning which was rated Not Likely to Adversely Affect and actions proposed in the Draft John Day River Management Plan which were rated as Not Likely to Adversely Affect. Reasons for the LAA ratings were due to the possible disturbance of spawning fish and possible disturbance of rearing fish from grazing activities and spawning bed surveys or the indirect effects of habitat degradation through impacts to riparian vegetation. Grazing management activities could potentially disrupt spawning fish activities or cause juvenile rearing fish to move temporarily into a more hostile environment, or impact riparian vegetation, bank stability and water quality thereby leading to degradation of fish habitat. The remaining determinations were based on the potential for fish habitat alterations due to effects on riparian area with regard to various actions proposed. Cumulatively these disturbances are minor, and should not impact steelhead trout populations to a magnitude that the continued existence of the species is jeopardized.

Literature Cited

- Anderson, J. J., 1995. Decadal Climate Cycles and Declining Columbia River Salmon. Proceedings of the Sustainable Fisheries Conference. Victoria, B.C. 1996. Eric Knudson, Editor. Special Publication of the American Fisheries Society.
- Ballard, T.M. 1999. Interaction of cattle and chinook salmon. MS Thesis, Oregon State University, Corvallis, Oregon.
- Bedell, T.E., L.E. Eddleman, T. Deboodt, and C. Jacks. 1993. Western Juniper - Its Impact and Management in Oregon Rangelands. Oregon State University Extension Service Publication #EC 1417.
- Chamberlain, T.W., R.D. Harr, and F.H. Everest. 1991. Timber Harvesting, Silviculture, and Watershed Processes. *In* influences of Forest and Rangeland Management on Salmonid Fishes and Their Habitats. American Fisheries Society Special Publication. pp 181-205.
- Chilcote, M.W. 1998. Conservation Status of Steelhead in Oregon. Oregon Department of Fish and Wildlife. Information Report #98-3. Portland, OR.
- Collette, C. and J. Harrison (editors), 1992. Columbia River Basin Fish and Wildlife Program - Strategy for Salmon, Vol. I & II. Northwest Power Planning Council.
- Federal Register 1999. Final Rule; notice of determination. Endangered and threatened species: threatened status for two ESUs of steelhead in Washington and Oregon. Vol. 64, No. 5, March 25, 1999.
- Gregory, S.V., F.J. Swanson, W.A. McKee, and K.W. Cummins. 1991. An ecosystem of perspective riparian zones. *BioScience*. 41(8):540-551.
- Kostow, K. 1995. Biennial Report on the Status of Wild Fish in Oregon. Oregon Department of Fish and Wildlife. Portland, OR.
- Muhn, J. and H.R. Stuart, 1988. Opportunity and challenge the story of the BLM. US Department of the Interior, Bureau of Land Management, Washington, D.C.
- Oregon Department of Fish and Wildlife. 1990. John Day River Subbasin Salmon and Steelhead Production Plan. Portland, OR.
- Oregon Department of Fish and Wildlife. 1990. Umatilla River Subbasin Salmon and Steelhead Production Plan. Portland, OR.

Oregon Department of Water Resources. 1986. John Day Basin Report.

Platts, WS 1991. Livestock Grazing. *In* influences of Forest and Rangeland Management on Salmonid Fishes and Their Habitats. American Fisheries Society Special Publication, pp 181-205.

Reisenbichler, R.R.; McIntyre, J.D.; Solazzi, M.F., and Landino, S.W. Genetic variation in steelhead of Oregon and northern California. Transactions of the American Fisheries Society. 1992; 121(2):158-169.

Schreck, C.B., K.W. Li, R.D. Hort., and CS. Sharpe. 1986. Stock identification of Columbia River chinook salmon and steelhead trout. Division of Fish and Wildlife, Bonneville Power Administration, Project 83-451, Final Report, Portland, OR.

Taylor, G.H., and C. Southards. 1997. Long Term Climate Trends and Salmon Populations. Oregon Climate Service Report.

Unterwegner, T., ODFW John Day District Fish Biologist. 1999. Personal Communication.

USDI, Bureau of Land Management. 1985. Two Rivers Resource Management Plan, Record of Decision, Rangeland Program Summary (RPS). Prineville District, BLM. Prineville, OR.

USFWS and NMFS 1998. Endangered species act consultation handbook, procedures for conducting section 7 consultations and conferences. U.S. Government Printing Office. Washington, D.C.

Appendix A

See attached maps.

Allotment Number	Name	Season of Use		Public Acres	Stream Mileage		Steelhead Habitat Miles
		Start	End		Perennial	Intermittent	

Likely to Adversely Affect

2509	BELSHE	4/ 1/00	6/14/00	1,840	1.50	1.25	2.75
2518	PINE CREEK	4/16/00	11/17/00	5,418	4.50	0.00	4.50
2541	EAKIN	4/ 1/00	6/30/00	1,760	0.00	2.00	2.00
2547	SIXMILE	12/ 1/00	5/ 1/00	2,397	0.00	3.00	3.00
2554	CHARLES H. HILL	4/ 1/00	11/30/00	1,835	0.75	2.60	0.50
2558	SQUAW CREEK	4/ 1/00	11/30/00	5,086	2.50	6.40	2.10
2559	FOPIANO	4/15/00	11/15/00	280	0.50	0.10	0.60
2581	ELSIE MARTIN	5/ 1/00	10/15/00	920	0.00	2.00	0.00
2598	HAY CREEK	10/15/00	5/ 1/00	1,518	1.00	0.00	1.00
2607	PRYOR FARMS	4/ 1/00	11/ 4/00	800	0.50	0.00	0.50
2645	CLARK	4/15/00	10/16/00	1,550	3.10	5.60	1.20
2662	JOHNSON CREEK	4/ 1/00	11/15/00	7,698	2.00	11.50	1.60
4016	DIXIE	6/ 1/00	10/31/00	2,548	5.70	2.70	4.60
4020	MURDERERS CREEK	4/20/00	9/20/00	16,004	7.60	48.00	5.90
4029	NORTH FORK	5/ 1/00	5/31/00	1,894	5.75	1.60	5.75
4042	JOHNNY CAKE MTN.	4/ 1/00	11/30/00	280	1.20	0.60	1.20
4045	BEAR GULCH	5/ 1/00	6/15/00	74	0.10	0.00	0.10
4046	THREE MILE	4/ 1/00	5/31/00	40	0.40	0.00	0.40
4052	BIG BALDY	4/15/00	5/31/00	12,726	11.80	19.00	4.40
4056	POINTER	5/ 1/00	6/15/00	85	0.60	0.00	0.60
4071	ROUND TOP	4/ 1/00	11/30/00	360	0.30	1.20	0.30
4076	COTTONWOOD CREEK	4/ 1/00	9/30/00	3,113	1.50	8.00	0.80
4085	BARBER POLE BUTTE	11/ 1/00	2/28/00	560	0.10	1.40	0.10
4093	WEST BOLOGNA CREEK	5/ 1/00	6/30/00	80	0.60	0.40	0.60
4103	ROCKPILE	4/ 1/00	11/30/00	4,918	10.80	7.50	7.60
4108	LITTLE WALL CREEK	4/ 1/00	5/31/00	320	0.70	0.30	0.70
4115	CANYON MTN. *	5/ 1/00	6/15/00	50	0.40	0.20	0.40
4151	KINZUA	5/ 1/00	10/31/00	9,493	4.80	15.40	2.70
4163	CREEK	4/10/00	11/30/00	706	0.70	3.00	0.70

Allotment
Number Name

Season of Use

Start End

Public Acres

Stream Mileage

Perennial Intermittent

Steelhead Habi

Miles

Number of Allotments: 29

Not Likely to Adversely Affect

2501	HERBERT ASHER	4/ 1/00	12/31/00	2,000	0.60	4.60	0.00
2508	BEAR CREEK	4/15/00	11/29/00	842	0.00	0.75	0.00
2512	BIG MUDDY	3/ 1/00	12/18/00	14,890	5.59	5.50	5.34
2514	BLACK ROCK ASSOCIATION	4/ 1/00	10/31/00	3,325	0.25	2.00	0.00
2516	GABLE CREEK	11/ 1/00	4/15/00	5,025	6.50	3.00	6.50
2520	SMITH POINT	4/ 1/00	9/30/00	2,596	3.00	0.00	3.00
2523	KAHLER CREEK	5/ 1/00	6/30/00	130	0.05	0.60	0.05
2524	BUCK HOLLOW	5/ 1/00	9/30/00	441	0.00	0.25	0.00
2525	ROCK CREEK	3/ 1/00	2/28/00	2,074	0.00	0.00	0.00
2531	CIRCLE BAR	11/ 1/00	5/30/00	19,708	6.50	1.00	6.50
2532	TOM COLE	4/ 1/00	12/15/00	1,633	1.00	0.00	1.00
2533	SUTTON MOUNTAIN	4/ 1/00	12/31/00	25,315	7.50	1.00	7.50
2535	HAYFIELD	5/20/00	11/ 4/00	345	0.50	0.00	0.50
2544	CIRCLE S RANCH	4/ 1/00	12/31/00	518	0.75	0.00	0.75
2545	CHERRY CREEK	3/ 1/00	2/28/00	11,095	0.50	0.00	0.50
2551	CLINTON O. HARRIS	5/ 1/00	7/15/00	934	0.80	2.00	0.80
2556	MURRAY HOWARD	4/ 1/00	12/19/00	1,045	2.00	0.00	2.00
2560	BASELINE	4/16/00	10/15/00	598	1.25	0.00	1.25
2561	GIRDS CREEK	4/ 1/00	6/30/00	587	1.00	0.00	1.00
2563	HORSESHOE CREEK	4/ 1/00	10/31/00	1,062	5.10	2.10	5.10
2565	LEROY A. BRITT	4/15/00	11/ 3/00	431	0.20	0.10	0.30
2566	JUSTESEN	3/16/00	4/30/00	113	0.00	0.50	0.00
2577	BYRDS POINT	4/16/00	12/15/00	1,495	0.75	0.00	0.75
2578	LOGAN	9/15/00	12/31/00	2,194	0.00	2.80	0.00
2584	CATHERINE MAURER	3/ 1/00	2/28/00	14,683	7.00	0.00	7.00
2587	CORRAL CANYON	3/ 1/00	12/15/00	2,101	0.25	0.00	0.00
2593	VERNE A. MOBLEY	11/ 1/00	5/ 1/00	1,240	3.00	0.00	3.00

Allotment		Season of Use		Public Acres	Stream Mileage		Steelhead Habitat
Number	Name	Start	End		Perennial	Intermittent	Miles
2601	VICTOR B. NASH	6/ 1/00	1/31/00	160	0.00	0.60	0.00
2608	RATTRAY	3/25/00	2/28/00	8,434	8.25	0.00	8.25
2609	CROWN ROCK	4/15/00	12/15/00	1,085	2.00	0.00	2.00
2611	VAN RIETMANN	3/ 1/00	7/ 5/00	680	0.10	0.00	0.10
2613	FRANK R. ROBINSON	5/ 1/00	8/31/00	200	0.20	0.70	0.20
2623	STEIWER RANCHES	3/ 1/00	2/28/00	2,826	6.00	0.00	6.00
2629	TATUM	5/16/00	10/19/00	2,889	2.00	1.00	3.00
2631	DIPPING VAT	4/ 1/00	10/ 7/00	1,160	0.00	1.00	1.00
2639	TUBB CREEK	5/15/00	10/30/00	429	0.60	0.60	0.60
2642	LILLIAN C. MASCALL	7/15/00	10/30/00	4,308	0.20	7.80	0.20
2660	RATTLESNAKE CREEK	5/15/00	10/30/00	280	0.40	0.60	0.40
4001	JOHNNY CREEK	4/ 1/00	11/30/00	1,040	1.20	2.50	0.40
4003	SLICKEAR MT.	4/ 1/00	11/ 1/00	3,274	4.30	2.40	3.80
4006	DAMON CREEK	4/ 1/00	11/30/00	160	0.00	0.60	0.00
4007	WINDY POINT	4/ 1/00	11/30/00	2,514	0.00	8.40	0.00
4009	BIRCH CREEK	4/ 1/00	11/30/00	3,169	1.00	0.00	1.00
4012	RIVER	10/ 1/00	11/30/00	135	0.60	0.00	0.60
4014	MIDDLE FORK	4/ 1/00	5/31/00	562	1.20	0.60	1.20
4015	MUD SPRINGS	5/31/00	10/31/00	240	0.20	0.30	0.20
4022	LONG HOLLOW	4/ 1/00	11/30/00	80	0.20	0.40	0.20
4025	PORTUGUESE	4/ 1/00	11/30/00	160	0.00	1.00	0.00
4028	NEAL BUTTE	4/ 1/00	5/31/00	712	3.20	0.70	3.20
4030	POWERSITE	4/ 1/00	11/30/00	120	0.00	1.00	0.00
4031	COYOTE FIELD	4/ 1/00	11/30/00	160	0.00	0.80	0.00
4037	JUNIPER	4/ 1/00	11/30/00	400	0.00	1.10	0.00
4038	DAYVILLE	6/ 1/00	7/13/00	1,640	2.60	3.20	0.00
4041	FRANKS CREEK	4/ 1/00	11/30/00	2,617	1.70	5.80	0.90
4047	LITTLE INDIAN	4/ 1/00	11/30/00	200	0.20	0.80	0.20
4049	BATTLE CREEK	4/ 1/00	11/30/00	4,958	5.00	12.60	0.00
4050	JINKS CREEK	4/ 1/00	11/30/00	556	0.00	0.30	0.30
4059	COLD SPRINGS	4/ 1/00	11/30/00	280	0.50	0.00	0.00
2058	BAKER CITY	4/ 1/00	11/30/00	640	0.80	1.60	0.80

Allotment		Season of Use		Public Acres	Stream Mileage		Steelhead Habi Miles
Number	Name	Start	End		Perennial	Intermittent	
4061	SCOTT CREEK	4/ 1/00	11/30/00	1,907	0.00	3.80	0.00
4065	EAST FRANKS CREEK	4/ 1/00	11/30/00	644	0.00	0.80	0.00
4066	KIDD CREEK	4/ 1/00	11/30/00	1,483	0.00	5.00	0.00
4067	SHEEP CREEK	4/ 1/00	11/30/00	2,876	2.00	3.00	0.00
4068	SHEEP GULCH	4/15/00	7/15/00	3,499	2.00	13.00	0.00
4069	BIG SPRINGS	4/ 1/00	9/20/00	107	0.00	0.40	0.00
4074	MCCARTY CREEK	4/ 1/00	7/31/00	867	1.70	1.60	0.00
4077	MOON MOUNTAIN	4/ 1/00	11/30/00	240	0.10	0.20	0.10
4078	GIBSON HILL	4/ 1/00	11/30/00	40	0.00	0.20	0.00
4083	19 20	4/ 1/00	5/31/00	160	0.60	0.40	0.60
4086	RUDIO MTL	7/ 1/00	10/15/00	3,860	1.40	3.40	0.00
4087	BLUE BASIN	4/ 1/00	11/30/00	1,000	0.00	0.60	0.00
4092	LITTLE BEACH	4/ 1/00	11/30/00	360	0.00	0.60	0.00
4094	DRY CREEK	4/ 1/00	11/30/00	120	0.00	0.20	0.00
4095	FIELDS CREEK	6/ 1/00	9/15/00	1,092	0.40	2.50	0.00
4099	INDIAN	5/ 1/00	6/15/00	120	0.40	0.00	0.40
4100	BOBCAT	7/ 1/00	10/31/00	160	0.00	1.00	0.00
4104	SOUTH FORK	4/ 1/00	11/30/00	1,075	0.20	2.10	0.00
4106	IZEE	4/ 1/00	11/30/00	1,200	0.20	0.80	0.00
4109	BIG CANYON CREEK	5/ 1/00	11/30/00	148	0.60	0.00	0.00
4110	FUNNY BUTTE	6/ 1/00	10/ 1/00	1,042	0.20	1.00	0.00
4112	COTTONWOOD FORKS	4/ 1/00	5/31/00	1,558	0.40	4.00	0.40
4113	COURTHOUSE ROCK	6/ 1/00	11/ 1/00	480	0.00	0.70	0.00
4118	BEECH CREEK	5/ 1/00	11/30/00	1,119	0.30	3.40	0.00
4119	BLACK CANYON	4/ 1/00	11/30/00	944	0.50	3.00	0.00
4120	FERRIS CREEK	4/15/00	9/15/00	3,177	0.70	9.70	0.00
4121	AIRPORT	4/ 1/00	11/30/00	320	0.20	0.90	0.00
4124	SMOKEY CREEK	7/ 1/00	11/30/00	2,213	1.60	5.20	0.20
4125	UMATILLA	4/ 1/00	11/30/00	679	0.90	1.20	0.90
4128	CUMMINGS CREEK	4/ 1/00	11/30/00	160	0.00	0.60	0.00
4129	BELSHAW CREEK	4/ 1/00	11/30/00	641	0.10	1.50	0.10
4131	DAY CREEK	4/ 1/00	10/31/00	1,583	0.30	4.50	0.00

Allotment		Season of Use		Public Acres	Stream Mileage		Steelhead Habitat
Number	Name	Start	End		Perennial	Intermittent	Miles
4134	LOOKOUT	5/ 1/00	10/ 1/00	119	0.00	0.60	0.00
4135	GIBSON CREEK	4/ 1/00	11/30/00	120	0.25	0.00	0.25
4136	BALDWIN GULCH	4/ 1/00	11/30/00	320	0.20	0.00	0.20
4139	BONE YARD	5/ 1/00	11/30/00	1,480	0.00	4.00	0.00
4141	PINE CREEK	4/ 1/00	11/30/00	355	0.00	0.60	0.00
4145	TWO COUNTY	4/ 1/00	11/30/00	13,796	7.90	30.80	3.10
4154	MORGAN CREEK	4/ 1/00	11/30/00	1,847	1.20	2.20	0.00
4155	BLACKHORSE DRAW	4/ 1/00	11/30/00	0	1.90	6.20	0.00
4156	RUDIO CREEK	4/ 1/00	11/30/00	2,328	1.40	3.20	1.40
4158	FALL MTN.	8/ 1/00	11/30/00	280	0.00	0.60	0.00
4164	CORRAL GULCH	5/ 1/00	6/15/00	2,653	0.00	5.60	0.00
4167	QUARRY	4/ 1/00	6/ 1/00	200	0.40	0.00	0.00
4172	CUMMINGS FORK	4/ 1/00	11/30/00	320	0.00	0.40	0.00
4174	REYNOLDS CREEK	4/ 1/00	11/30/00	157	0.00	0.10	0.00
4176	DICK CREEK	4/ 1/00	11/30/00	1,000	0.80	3.20	0.80
4181	DOG CREEK RIDGE	6/ 1/00	9/ 1/00	120	0.00	0.30	0.00
4184	PASS CREEK	4/ 1/00	11/30/00	80	0.00	0.30	0.00
4186	BIG FLATS	4/15/00	11/30/00	3,637	1.50	0.90	0.00

Number of Allotments: 109

Allotment**Page Number Allotment****Page Number**

19 20	C 95	DAYVILLE	C 76
AIRPORT	C 113	DICK CREEK	C 135
BAKER CITY	C 12	DIPPING VAT	C 54
BALDWIN GULCH	C 121	DIXIE	C 68
BARBER POLE BUTTE	C 96	DOG CREEK RIDGE	C 136
BASELINE	C 36	DRY CREEK	C 100
BATTLE CREEK	C 80	EAKIN	C 27
BEAR CREEK	C 14	EAST FRANKS CREEK	C 85
BEAR GULCH	C 78	ELSIE MARTIN	C 2
BEECH CREEK	C 110	FALL MTN.	C 129
BELSHAW CREEK	C 117	FERRIS CREEK	C 112
BELSHE	C 15	FIELDS CREEK	C 101
BIG BALDY	C 82	FOPIANO	C 35
BIG CANYON CREEK	C 106	FRANK R. ROBINSON	C 51
BIG FLATS	C 138	FRANKS CREEK	C 77
BIG MUDDY	C 16	FUNNY BUTTE	C 107
BIG SPRINGS	C 89	GABLE CREEK	C 18
BIRCH CREEK	C 64	GIBSON CREEK	C 120
BLACK CANYON	C 111	GIBSON HILL	C 94
BLACK ROCK ASSOCIATION	C 17	GIRDS CREEK	C 37
BLACKHORSE DRAW	C 127	HAY CREEK	C 46
BLUE BASIN	C 98	HAYFIELD	C 26
BOBCAT	C 103	HERBERT ASHER	C 13
BONE YARD	C 122	HORSESHOE CREEK	C 38
BUCK HOLLOW	C 21	INDIAN	C 102
BYRDS POINT	C 41	IZEE	C 105
CANYON MTN.	C 11	JINKS CREEK	C 81
CATHERINE MAURER	C 43	JOHNNY CAKE MTN.	C 5
CHARLES H. HILL	C 32	JOHNNY CREEK	C 60
CHERRY CREEK	C 29	JOHNSON CREEK	C 59
CIRCLE BAR	C 23	JUNIPER	C 75
CIRCLE S RANCH	C 28	JUSTESEN	C 40
CLARK	C 57	KAHLER CREEK	C 20
CLINTON O. HARRIS	C 31	KIDD CREEK	C 86
COLD SPRINGS	C 83	KINZUA	C 125
CORRAL CANYON	C 44	LEROY A. BRITT	C 39
CORRAL GULCH	C 131	LILLIAN C. MASCALL	C 56
COTTONWOOD CREEK	C 92	LITTLE BEACH	C 99
COTTONWOOD FORKS	C 108	LITTLE INDIAN	C 79
COURTHOUSE ROCK	C 109	LITTLE WALL CREEK	C 10
COYOTE FIELD	C 74	LOGAN	C 42
CREEK	C 130	LONG HOLLOW	C 70
CROWN ROCK	C 49	LOOKOUT	C 119
CUMMINGS CREEK	C 116	MCCARTY CREEK	C 91
CUMMINGS FORK	C 133	MIDDLE FORK	C 66
DAMON CREEK	C 62	MOON MOUNTAIN	C 93
DAY CREEK	C 118	MORGAN CREEK	C 126

Allotment	Page Number	Allotment	Page Number
MUD SPRINGS	C 67	SCOTT CREEK	C 84
MURDERERS CREEK	C 69	SHEEP CREEK	C 87
MURRAY HOWARD	C 33	SHEEP GULCH	C 88
NEAL BUTTE	C 72	SIXMILE	C 30
NORTH FORK	C 4	SLICKEA. MT.	C 61
PASS CREEK	C 137	SMITH POINT	C 19
PINE CREEK	C 1	SMOKEY CREEK	C 114
PINE CREEK	C 123	SOUTH FORK	C 104
POINTER	C 7	SQUAW CREEK	C 34
PORTUGUESE	C 71	STEIWER RANCHES	C 52
POWERSITE	C 73	SUTTON MOUNTAIN	C 25
PRYOR FARMS	C 3	TATUM	C 53
QUARRY	C 132	THREE MILE	C 6
RATTLESNAKE CREEK	C 58	TOM COLE	C 24
RATTRAY	C 48	TUBB CREEK	C 55
REYNOLDS CREEK	C 134	TWO COUNTY	C 124
RIVER	C 65	UMATILLA	C 115
ROCK CREEK	C 22	VAN RIETMANN	C 50
ROCKPILE	C 9	VERNE A. MOBLEY	C 45
ROUND TOP	C 90	VICTOR B. NASH	C 47
RUDIO CREEK	C 128	WEST BOLOGNA CREEK	C 8
RUDIO MTN.	C 97	WINDY POINT	C 63

2509 BELSHE

ESA Determination: **Likely to Adversely Affect**

Acreage: 1,840	Public	Active Preference:	62 AUM's	Seral Stages:	1,246 Climax
1,100	Private	Season of Use: 4/ 1/00	- 6/14/00		166 Late Seral
2,940	Total	Stream Mileage:	1.50 Mainstem		103 Mid Seral
			1.50 Perennial		257 Early Seral
Fish Habitat:	2.75 Miles		1.25 Intermittent		68 Unclassified
Steelhead Habitat:	2.75 Miles		0.00 Ephemeral		
			2.75 Total		

Steelhead habitat is composed of 1.5 miles of strictly main river channel migratory habitat and 1.25 miles of intermittent tributary spawning and rearing habitat.

Grazing Management:

Grazing in this allotment consists of spring use between April 1 and June 14.

Pasture along river and within Little Ferry Canyon are grazed 3/1-5/1.

Uplands are grazed 3/1-7/15.

Monitoring Information:

There is one trend photo plat and Step Point Transect that was established in July 1987.

Fisheries Information:

The stream miles associated with this allotment offer migration, spawning and rearing habitat for steelhead. The associated 1.5 mil of John Day River functions primarily as a migratory habitat, while the 1.25 miles of Little Ferry Canyon offers spawning and rear habitat for steelhead.

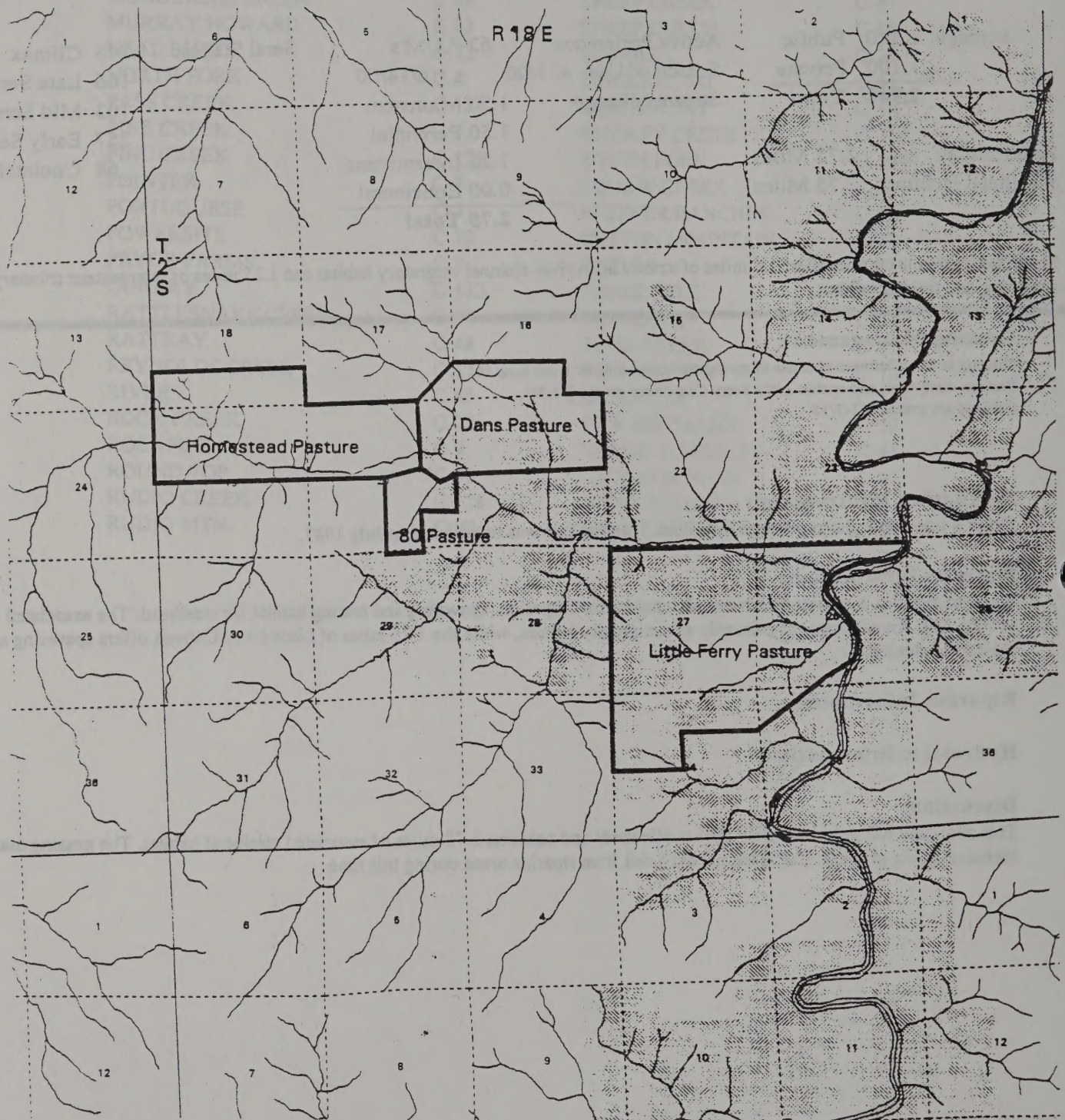
Riparian Information:

Hydrologic Information:

Discussion:

This allotment has approximately 50% public lands and contains 2.75 miles of associated steelhead habitat. The grazing managemen includes spring grazing. Cattle are not excluded from riparian areas during this time.

Belshe Allotment #02509



518 PINE CREEK

ESA Determination: **Likely to Adversely Affect**

Acreage: 5,418 Public	Active Preference: 346 AUM's	Seral Stages: 1,188 Climax
0 Private	Season of Use: 4/16/00 - 11/17/00	3,132 Late Seral
<u>5,418 Total</u>	Stream Mileage: 2.00 Mainstem	785 Mid Seral
	4.50 Perennial	113 Early Seral
Fish Habitat: 4.50 Miles	0.00 Intermittent	200 Unclassified
Steelhead Habitat: 4.50 Miles	0.00 Ephemeral	
	<u>4.50 Total</u>	

Steelhead habitat consists of 2.00 miles of John Day River which acts primarily as a migration corridor. The allotment also includes 2. miles of perennial streams including Pine Creek and Long Hollow Creek. Habitat with Pine and Long Hollow Creeks is typically spawning and rearing habitat for steelhead.

Grazing Management:

The three membered Pine Creek Grazing Association uses the allotment jointly though each member runs his own individual herd. Herd size ranges from 100 to 160 head of cattle per association member. Use occurs from spring through the fall.

Monitoring Information:

There are six trend study plots within this allotment. There are numerous photpoints along the stream and river also.

Fisheries Information:

Steelhead are known to occupy habitat within Pine Creek and Long Hollow Creek. These areas are used as spawning and rearing habitats.

Riparian Information:

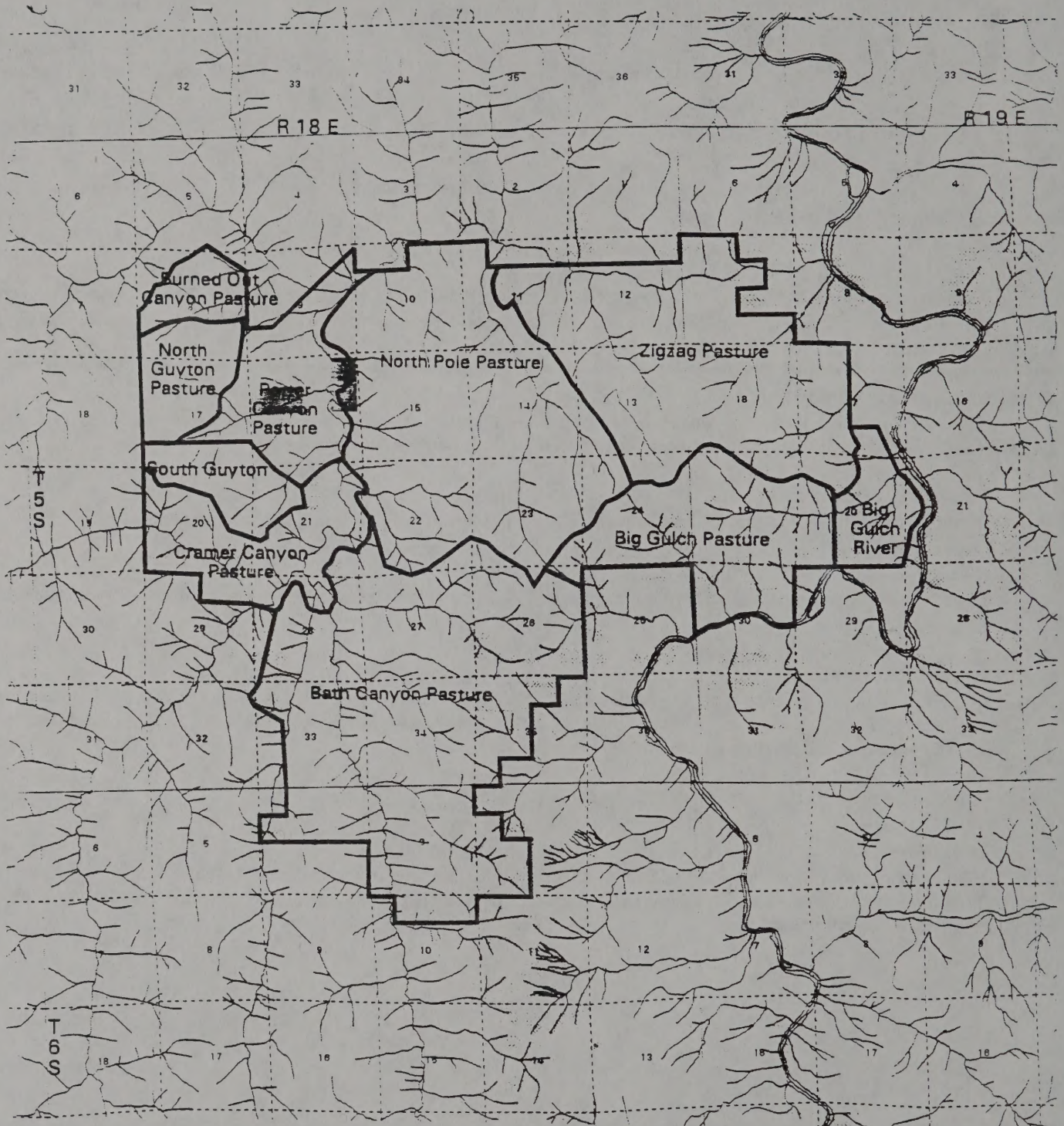
In the upper areas of Pine Creek and Long Hollow Creek alder and mock-orange are prevalent riparian species. Alders are found mostly near residual pools while mock-orange lines the banks in most areas. The lower reaches of Pine Creek have been heavily disturbed by pipeline maintenance and riparian vegetation is sparse.

Hydrologic Information:

Discussion:

A 1990 allotment evaluation recommended and changed the grazing use within this allotment. The recommendations are now followed for grazing use: Grazing on riparian pastures should be restricted to early spring, March 1 to May 1, and/or winter, November 15 through January.

Pine Creek Allotment #02518



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



2541 EAKIN

ESA Determination: **Likely to Adversely Affect**

Acreage: 1.760	Public	Active Preference:	12 AUM's	Seral Stages:	1,333 Climax
0	Private	Season of Use: 4/ 1/00	- 6/30/00		242 Late Seral
<u>1,760</u>	Total	Stream Mileage:	0.00 Mainstem		83 Mid Seral
			0.00 Perennial		36 Early Seral
Fish Habitat:	2.00 Miles		2.00 Intermittent		66 Unclassified
Steelhead Habitat:	2.00 Miles		0.00 Ephemeral		
			<u>2.00</u>		Total

Steelhead habitat is spawning habitat within a section of intermittent stream.

Grazing Management:

Monitoring Information:

Fisheries Information:

Approximately 2 miles of Jackknife Canyon flows through allotment. Spawning surveys along Jackknife Canyon between 1993-1 indicate that steelhead do use Jackknife Canyon for spawning and rearing in exceptionally high water years. Most years however, stream does not connect to mainstem John Day due to low flows.

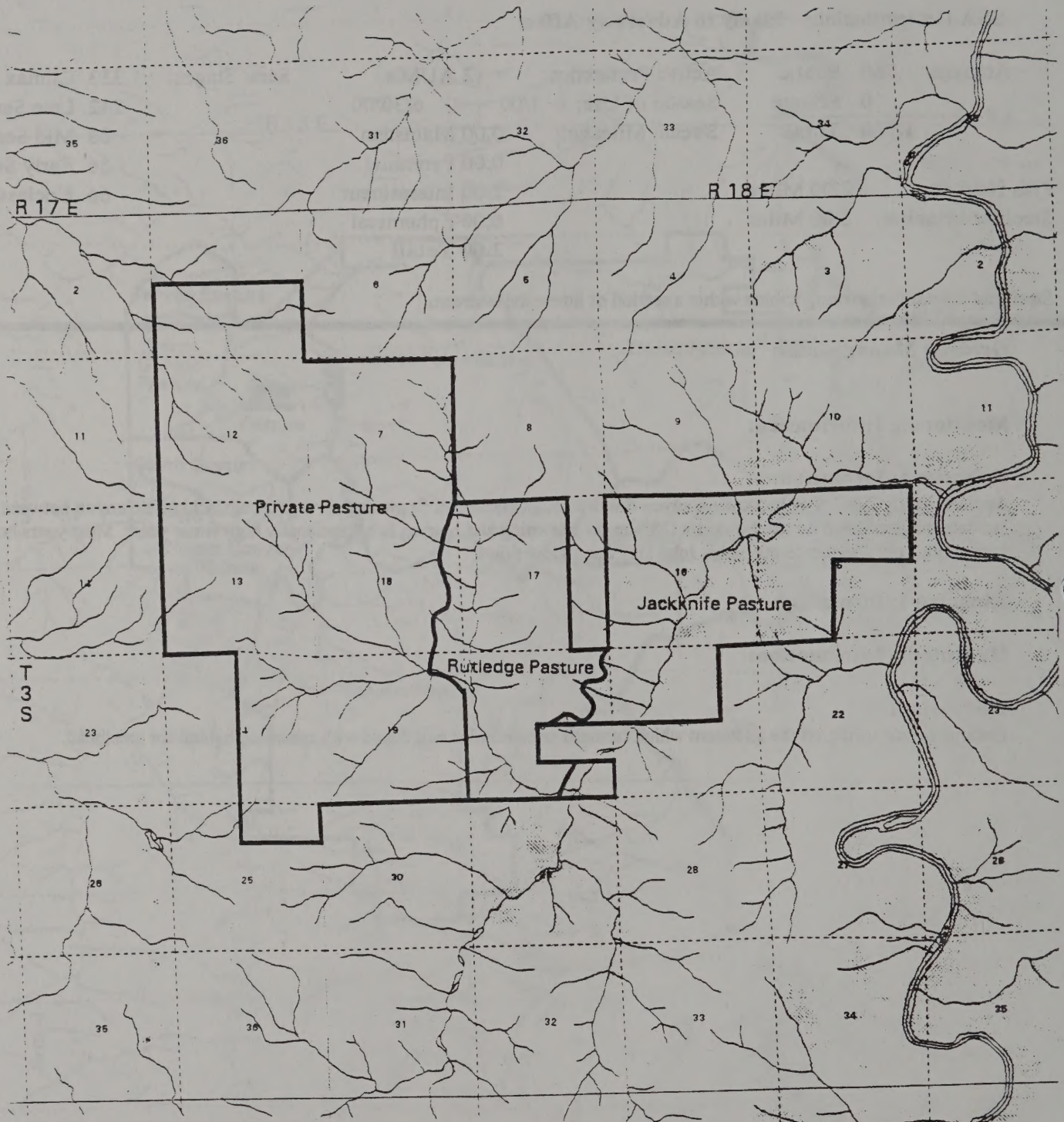
Riparian Information:

Hydrologic Information:

Discussion:

Grazing is late spring on the allotment which contains stream miles associated with spawning habitat for steelhead.

Eakin Allotment #02541



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



547 SIXMILE

ESA Determination: Likely to Adversely Affect

Acreage: 2,397 Public	Active Preference: 245 AUM's	Seral Stages: 102 Climax
2,722 Private	Season of Use: 12/ 1/00 - 5/ 1/00	1,873 Late Seral
<u>5,119 Total</u>	Stream Mileage: 0.00 Mainstem	333 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 3.00 Miles	3.00 Intermittent	89 Unclassified
Steelhead Habitat: 3.00 Miles	0.00 Ephemeral	
	<u>3.00 Total</u>	

Steelhead habitat is characterized and spawning and rearing habitat within the intermittent stream channel.

Grazing Management:

The grazing system is a winter/spring system with 245 AUM's on public land, grazed on a rotation basis between pastures.

Two pastures Hay Creek and Sixmile each grazed every year - one early spring the other winter, then opposite following year.

Monitoring Information:

There are two trend studies located within this allotment, both in the riparian area. One plot has shown an upward trend while the other shows a static trend.

Fisheries Information:

The fisheries resource directly related to this allotment are Hay Creek, where the presence of steelhead and native redband trout have been documented, and Sixmile Creek, where the potential to support these species also exists.

Riparian Information:

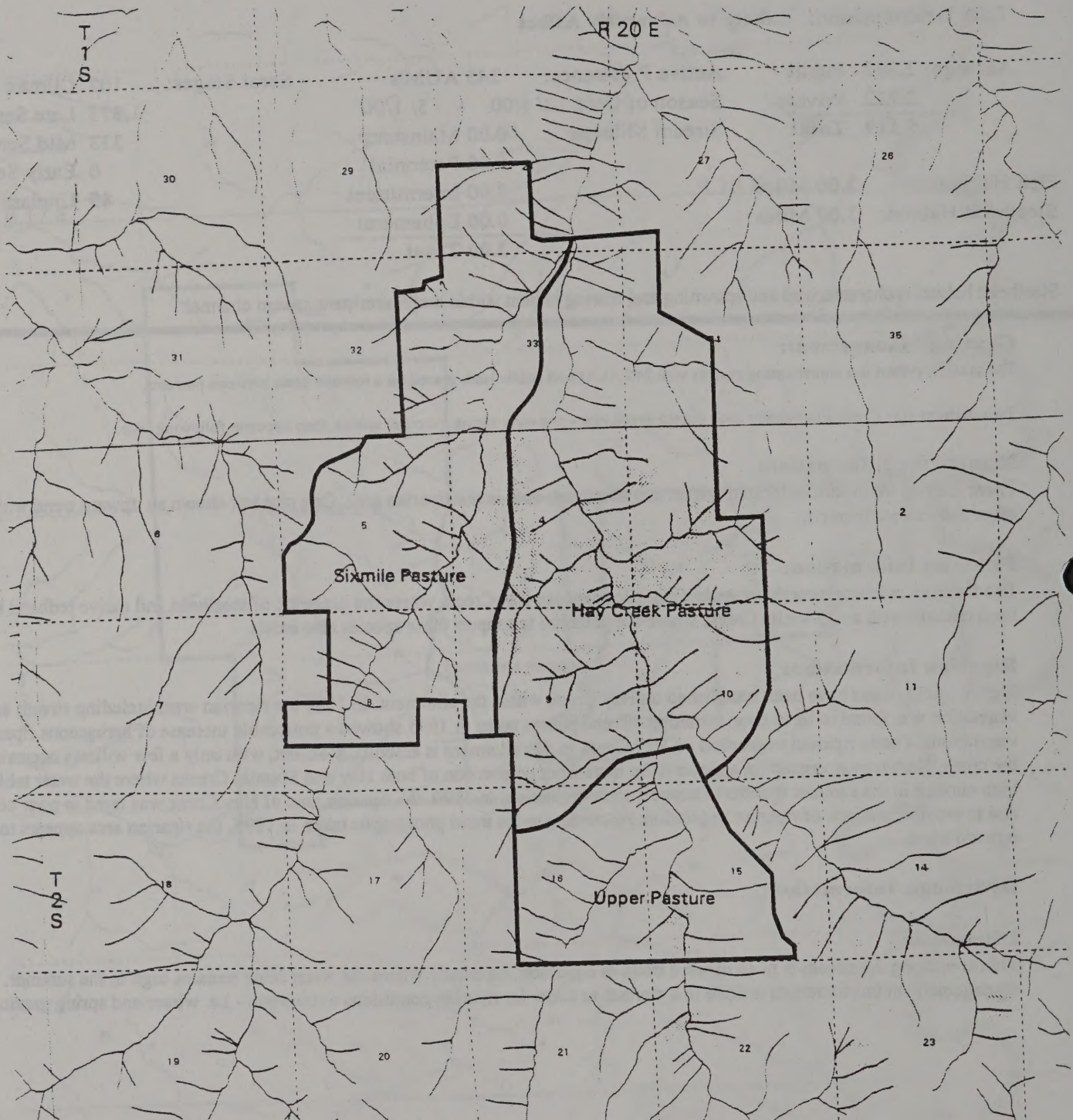
Eleven photo points have been established on Hay Creek within the allotment. In 1980 the riparian area, including stream and vegetation was found to be in poor condition. Trend photos taken in 1995 showed a noticeable increase of herbaceous riparian vegetation. Woody riparian vegetation on Hay Creek in this allotment is essentially absent, with only a few willows occurring along the creek. Herbaceous vegetation appears to be increasing on portions of both Hay and Sixmile Creeks where the water table remains high enough in the summer months to support such vegetation. In 1990, the riparian area of Hay Creek was rated in poor condition due to erosion and lack of riparian vegetation. According to the trend photographs taken in 1995, the riparian area appears to be in an upward trend.

Hydrologic Information:

Discussion:

This area along the stream is in an upward trend in condition, especially where the water table remains high in the summer. Grazing management on this allotment is done in a manner to allow for riparian conditions to improve - i.e. winter and spring grazing.

Sixmile Allotment #02547



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



554 CHARLES H. HILL

ESA Determination: **Likely to Adversely Affect**

Acreage: 1,835	Public	Active Preference:	86 AUM's	Seral Stages:	0 Climax
1,040	Private	Season of Use: 4/ 1/00	- 11/30/00		556 Late Seral
2,875	Total	Stream Mileage:	0.50 Mainstem		1,751 Mid Seral
			0.75 Perennial		156 Early Seral
Fish Habitat:	0.50 Miles		2.60 Intermittent		94 Unclassified
Steelhead Habitat:	0.50 Miles		0.00 Ephemeral		
			3.35 Total		

Grazing Management:

Livestock are rotated through four pastures. Actual use has averaged 116 AUM's between 1988 and 1996. Use in pasture with Bologna Creek and John Day River is early spring from 4/1 to 5/31.

Monitoring Information:

Utilization and three trend studies.

Fisheries Information:

The JDR (0.5 miles) is migratory corridor habitat only for steelhead trout. Fish move rapidly through this river segment during winter and spring periods when the river has good flows and temperatures. Fish generally utilize the thalweg and deep pools, and are not dependant upon river margin habitat for cover or feeding. An additional 0.25 miles of Bologna Creek is potential steelhead spawn and rearing habitat.

Riparian Information:

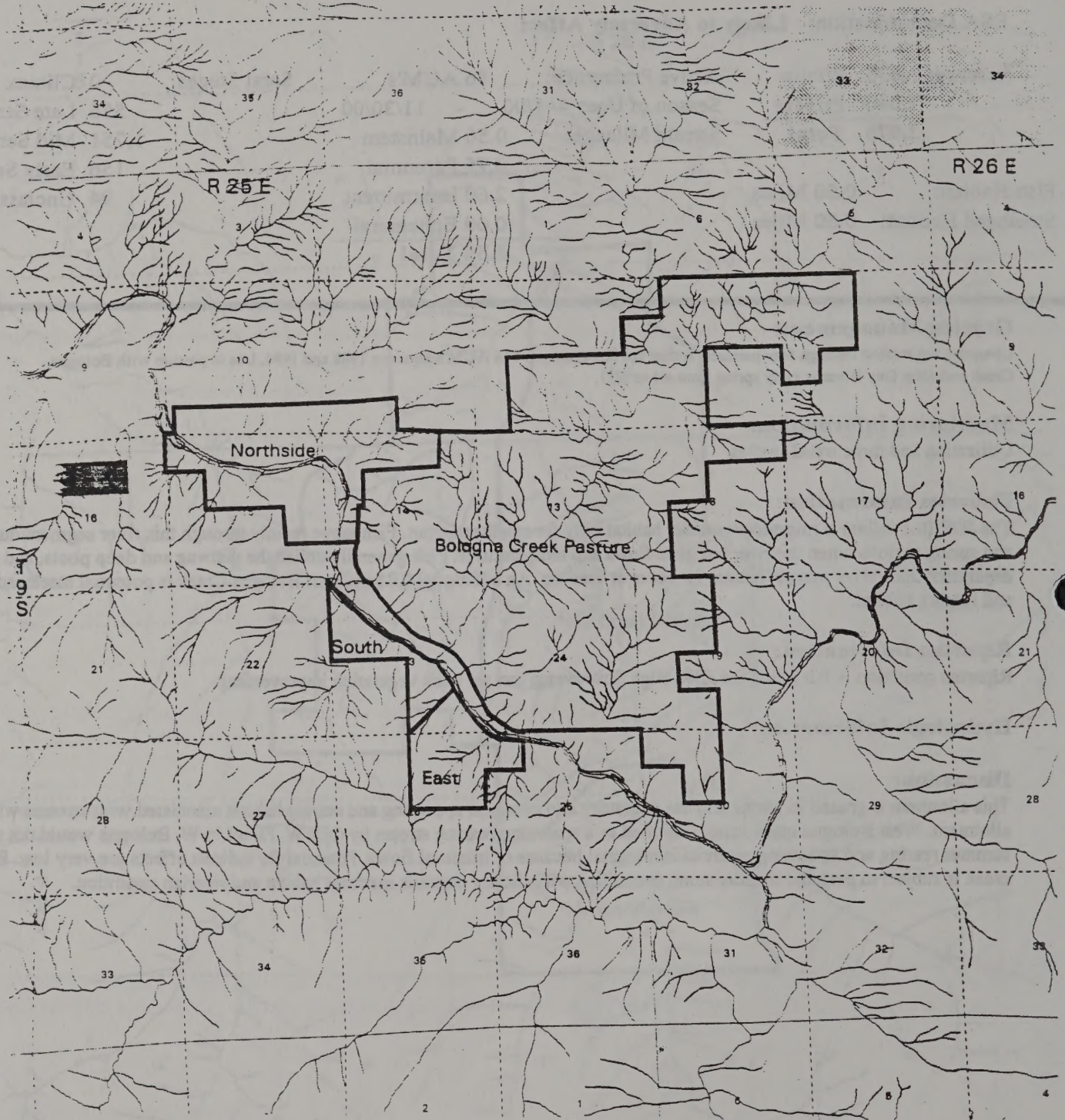
Riparian condition is fair along the JDR. High flow events can set back vegetation improvement.

Hydrologic Information:

Discussion:

This allotment is grazed in spring and has migratory and potential spawning and rearing habitat associated with streams within the allotment. West Bologna creek is not identified as a spawning/rearing stream by ODFW. Flows in W. Bologna would not support summer rearing and spawning potential is marginal because of minimal flows. Potential for indirect effects are very low. Bologna creek is subject to periodic thunder storm events that periodically degrade instream habitat and riparian condition.

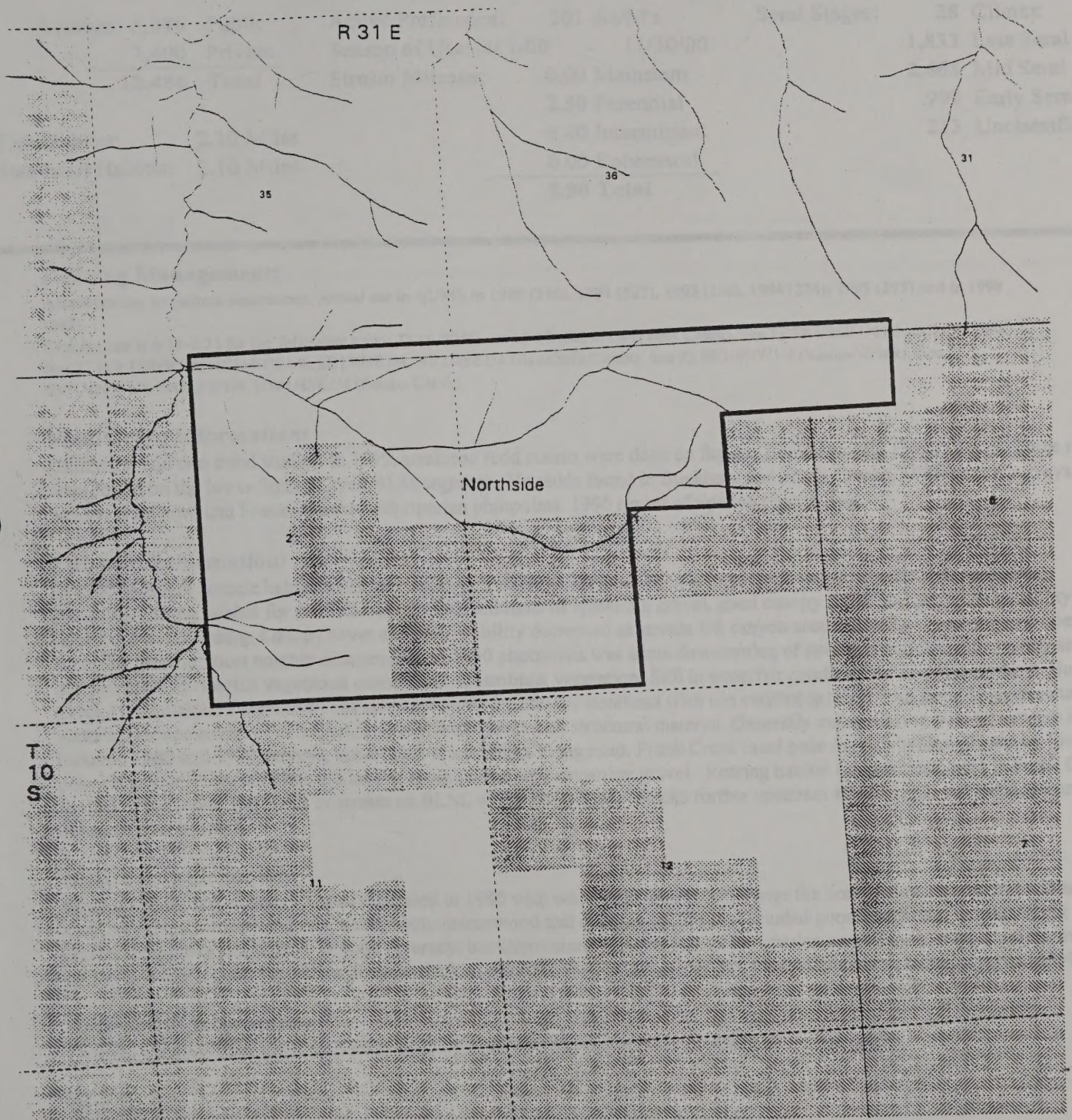
Charles H. Hill Allotment #02554



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



Charles H. Hill Allotment #02554



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



58 SQUAW CREEK

ESA Determination: **Likely to Adversely Affect**

Acreage: 5,086 Public	Active Preference: 301 AUM's	Seral Stages: 28 Climax
7,400 Private	Season of Use: 4/ 1/00 - 11/30/00	1,833 Late Seral
<u>12,486 Total</u>	Stream Mileage: 0.00 Mainstem	2,668 Mid Seral
	2.50 Perennial	999 Early Seral
Fish Habitat: 2.10 Miles	6.40 Intermittent	213 Unclassified
Steelhead Habitat: 2.10 Miles	0.00 Ephemeral	
	<u>8.90 Total</u>	

Grazing Management:

Allotment has no pasture separations. Actual use in AUM's in 1990 (310), 1991 (527), 1992 (310), 1994 (274), 1995 (295) and in 1996 (243).

Grazing use is 4/15-5/31 for the following areas: T11S.R25E sec 15 SE1/4SW1/4 (Frank Creek), Sec 17 SE1/4SE1/4 (Buckhorn Creek), Sec 21 NW1/4NE1/4, NE1/4NW1/4, SE1/4NE1/4, NE1/4SE1/4 (Buckhorn Creek), Sec 22 SE1/4NW1/4 (Squaw Creek), Sec 24 SW1/4NW1/4, N1/2SW1/4, NW1/4SE1/4 (Squaw Creek)

Monitoring Information:

Utilization and two trend studies. In 1999, steelhead redd counts were done on Squaw, Buckhorn, and Frank Creeks. Three redds were found on the lower Squaw Creek BLM segment. No redds found in Buckhorn and Frank Creeks. 1980 stream surveys on Squaw, Buckhorn and Franks Creeks with riparian photopoints. 1990 repeat of riparian photopoints.

Fisheries Information:

In 1980 instream aquatic habitat in Squaw Creek (1.0 mile on 2 segments) was rated good to fair. Squaw creek supports spawning/rearing habitat for steelhead trout. Good amounts of spawning gravel, good canopy cover and good bank stability contribute to this rating. Canopy cover and bank stability decreased as stream left canyon area and valley become more open. Easy access for grazing. Most notable changes seen in 1990 photopoints was some downcutting of stream channel in open valley segment and increases in riparian vegetation canopy and streambank vegetation. Still in good/fair condition for steelhead habitat. Buckhorn Creek (1.1 miles on 3 segments) has suitable rearing habitat for steelhead (fish use verified in 1999) with good large structural material, escape cover, pool habitat, instream wood and small structural material. Generally canopy cover over stream has increased between 1980 and 1990 surveys, but erosion is a problem along road. Frank Creek rated poor for fish habitat limited by low flows, poor pool conditions, siltation and lack of escape cover and spawning gravel. Rearing habitat for steelhead trout in Frank Creek limited to the lower 100 yards of stream on BLM, where a 6' headcut blocks further upstream access. Fish use verified immediate below barrier in 1999.

Riparian Information:

Riparian condition of Squaw Creek was rated in 1980 with white alder and mock orange the dominating communities. Dominant overstory trees were white alder, water birch, cottonwood and douglas fir. Shrubs included gooseberry, was currant, mock orange, chokecherry, rose and willow. A good diversity. Buckhorn creek was rated good for riparian condition in 1980, and improved some by 1990. It had a good vegetative diversity with overstory trees of alder, birch, fir, pine, cottonwood, mock orange and willows.

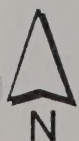
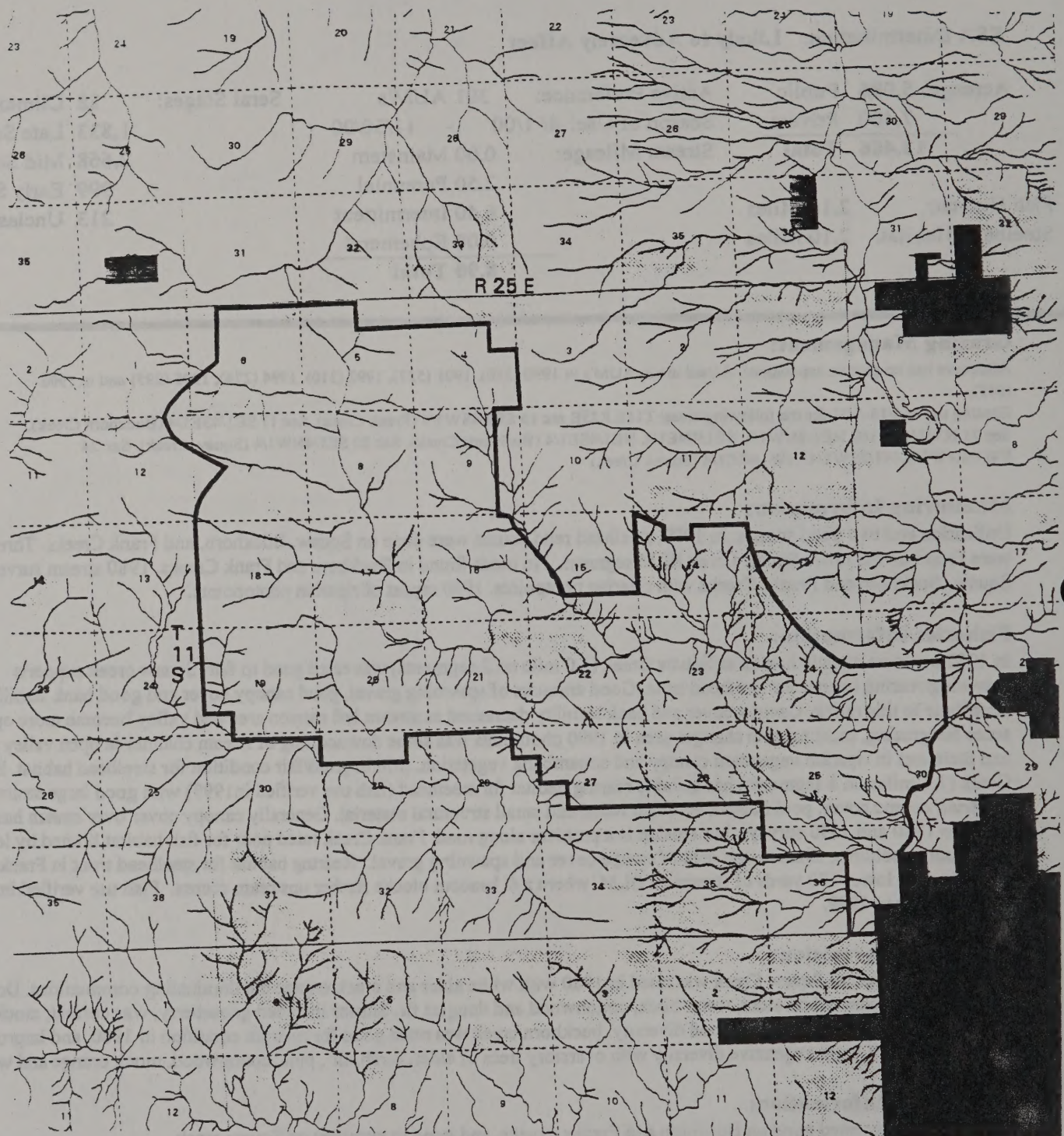
Hydrologic Information:

Channel stability rated good on Buckhorn and Franks Creeks, and good to excellent on Squaw creek.

Discussion:

Grazing has been restricted to early spring use along stream areas within the allotment.

Squaw Creek Allotment #02558



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



19 FOPIANO

ESA Determination: **Likely to Adversely Affect**

Acreage: 280 Public	Active Preference: 28 AUM's	Seral Stages: 61 Climax
43,720 Private	Season of Use: 4/15/00 - 11/15/00	258 Late Seral
<u>44,000 Total</u>	Stream Mileage: 0.00 Mainstem	231 Mid Seral
	0.50 Perennial	212 Early Seral
Fish Habitat: 0.60 Miles	0.10 Intermittent	0 Unclassified
Steelhead Habitat: 0.60 Miles	0.00 Ephemeral	
	<u>0.60 Total</u>	

Spawning and rearing habitat.

Grazing Management:

Grazing use is 4/15-5/31 on the following areas:
T12S, R24E Sec 5 NW1/4NE1/4 (Willow Creek)
T11S, R24E Sec 31 SE 1/4 Se 1/4 (Fopiano Creek)

Monitoring Information:

1980 stream survey, riparian habitat inventory on Willow and Fopiana Creeks.

Fisheries Information:

Willow Creek (0.4 miles) and Fopiano Creek (0.1 mile) support potential (not verified) spawning and rearing habitat, but more suitable habitat likely exists higher in their watersheds. High water temperatures from upstream habitats make these segments marginal habitat for steelhead. Fopiano and Willow Creeks were rated fair for instream fish habitat. Little shading occurs on Willow Creek. ODFW summer steelhead spawning map shows upper limits of spawning/rearing is below confluence of Fopiano Creek with Mountain Creek.

Riparian Information:

Riparian communities on both streams are well vegetated 70-80%, primarily grass/sedge/rush or sagebrush/grass/sedge. Both were rated fair.

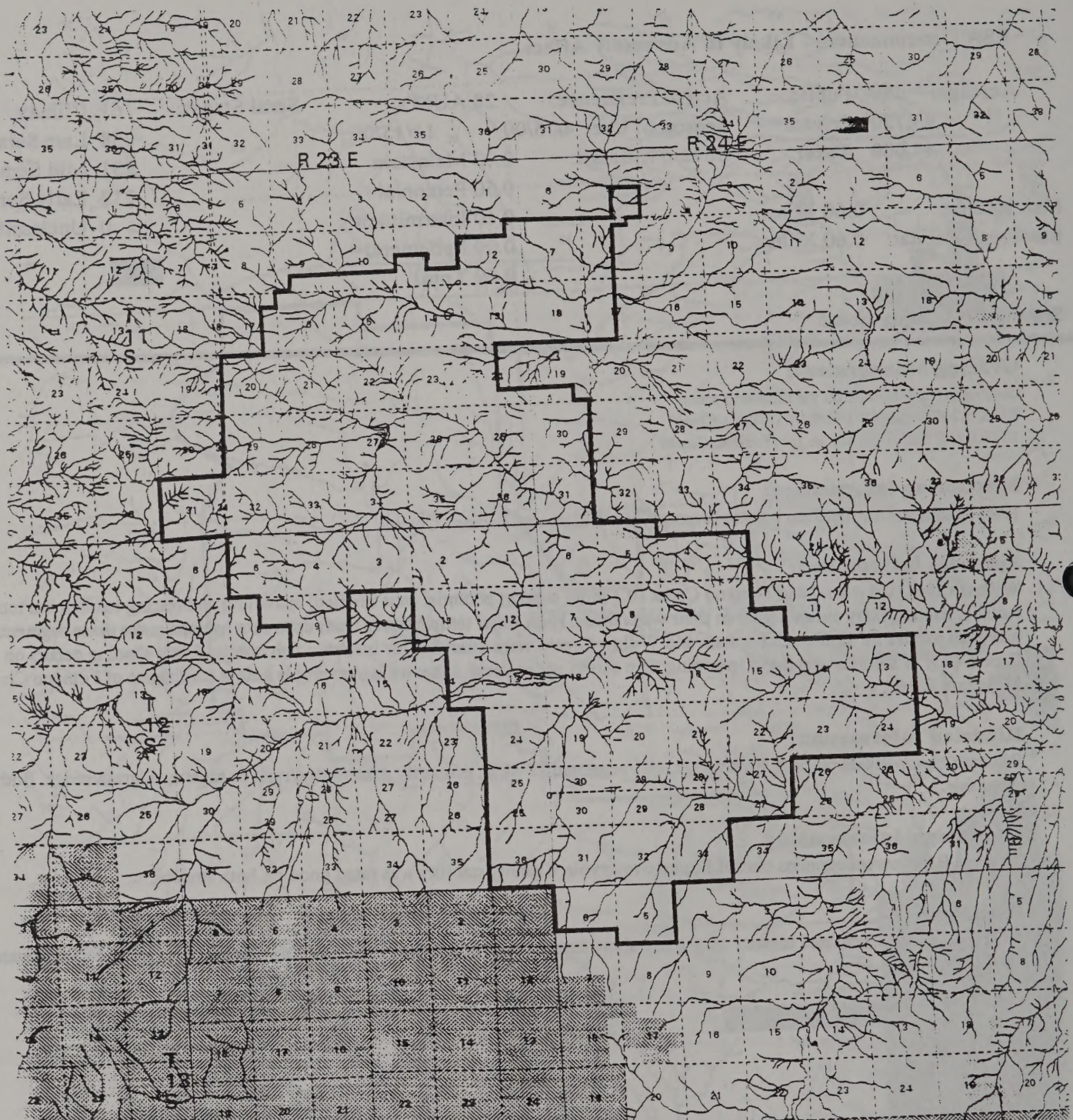
Hydrologic Information:

80 acres BLM parcel contains part of Fopiano reservoir. Channel stability was rated good on both streams.

Discussion:

Grazing has been restricted to early spring use along stream areas within the allotment. No spawning or rearing documented by ODFW.

Fopiano Allotment #02559



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



1 ELSIE MARTIN

ESA Determination: **Likely to Adversely Affect**

Acreage: 920 Public	Active Preference: 22 AUM's	Seral Stages: 68 Climax
0 Private	Season of Use: 5/ 1/00 - 10/15/00	623 Late Seral
<u>920 Total</u>	Stream Mileage: 0.00 Mainstem	195 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	2.00 Intermittent	34 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>2.00 Total</u>	

Grazing Management:

Grazing is done between 6/4 and 9/14 every year.

Monitoring Information:

Fisheries Information:

There are no perennial streams within this allotment, there is one ephemeral/intermittant drainage - Jackknife Canyon. There is no channel or water within the allotment.

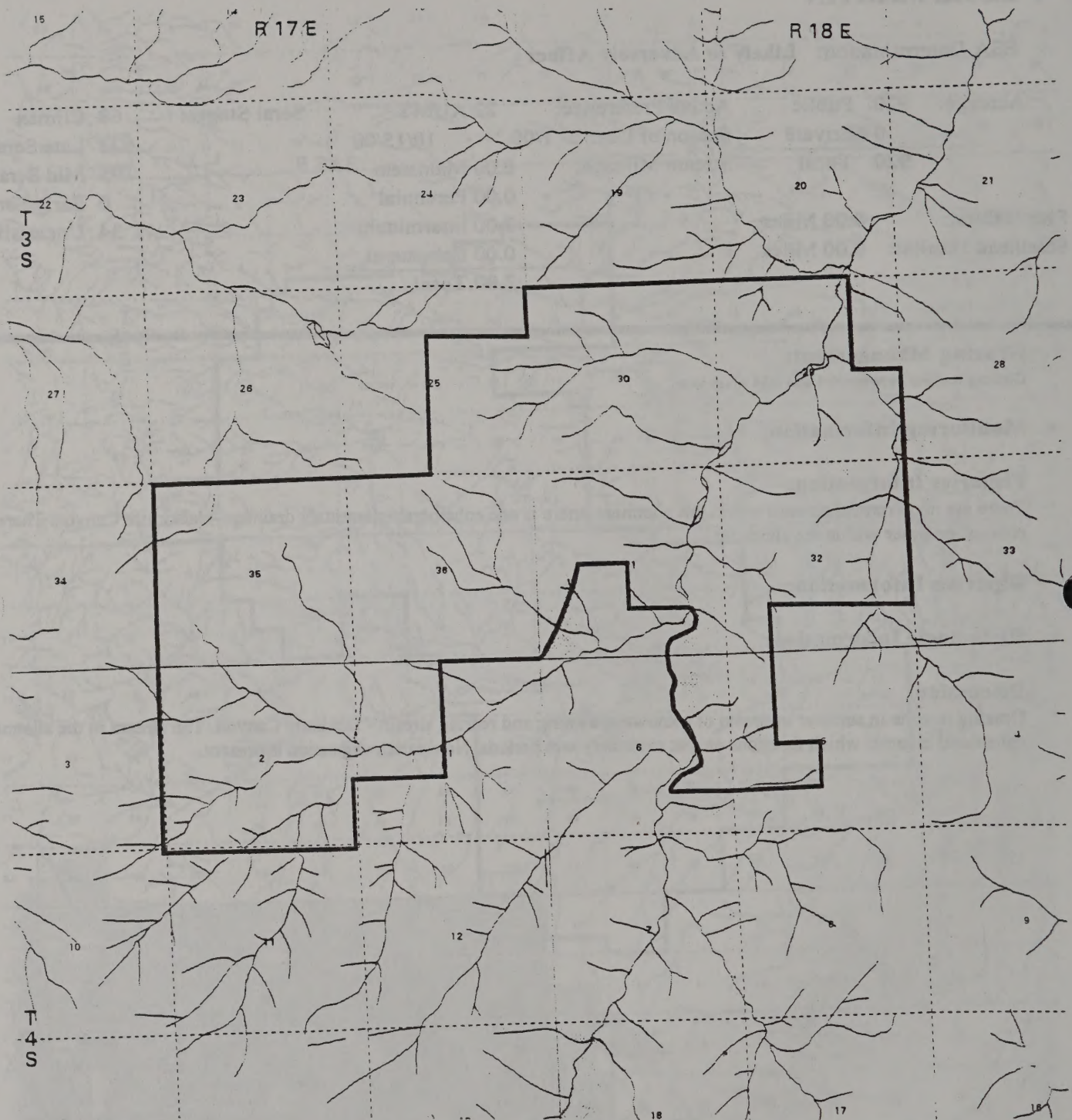
Riparian Information:

Hydrologic Information:

Discussion:

Grazing is done in summer upstream of a known spawning and rearing stream - Jackknife Canyon. The stream in the allotment is a ephemeral channel which functions only at extremely wet periods. No riparian vegetation is present.

Elsie Martin Allotment #02581



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



98 HAY CREEK

ESA Determination: **Likely to Adversely Affect**

Acreage: 1,518 Public	Active Preference: 37 AUM's	Seral Stages: 122 Climax
2,111 Private	Season of Use: 10/15/00 - 5/1/00	514 Late Seral
<u>3,629 Total</u>	Stream Mileage: 0.75 Mainstem	460 Mid Seral
	1.00 Perennial	422 Early Seral
Fish Habitat: 1.00 Miles	0.00 Intermittent	0 Unclassified
Steelhead Habitat: 1.00 Miles	0.00 Ephemeral	
	<u>1.00 Total</u>	

Steelhead habitat is approximately 0.75 miles of mainstem John Day river migratory habitat and 0.25 miles of Hay creek spawning and rearing habitat.

Summer grazing along mainstem.

Grazing Management:

This allotment is broken into several pastures. The pasture with public land within them are grazed in winter and spring. In June cattle are taken off the allotment entirely.

Riparian pasture is grazed 11/15 to 4/1 every year - winter grazing.

Monitoring Information:

Fisheries Information:

The fisheries resource directly related to this allotment is the mainstem John Day river and Hay creek. The John Day river provide migratory habitat for steelhead. Hay creek provides spawning and rearing habitat for steelhead. Approximately 0.25 miles of Hay creek within this allotment is public land.

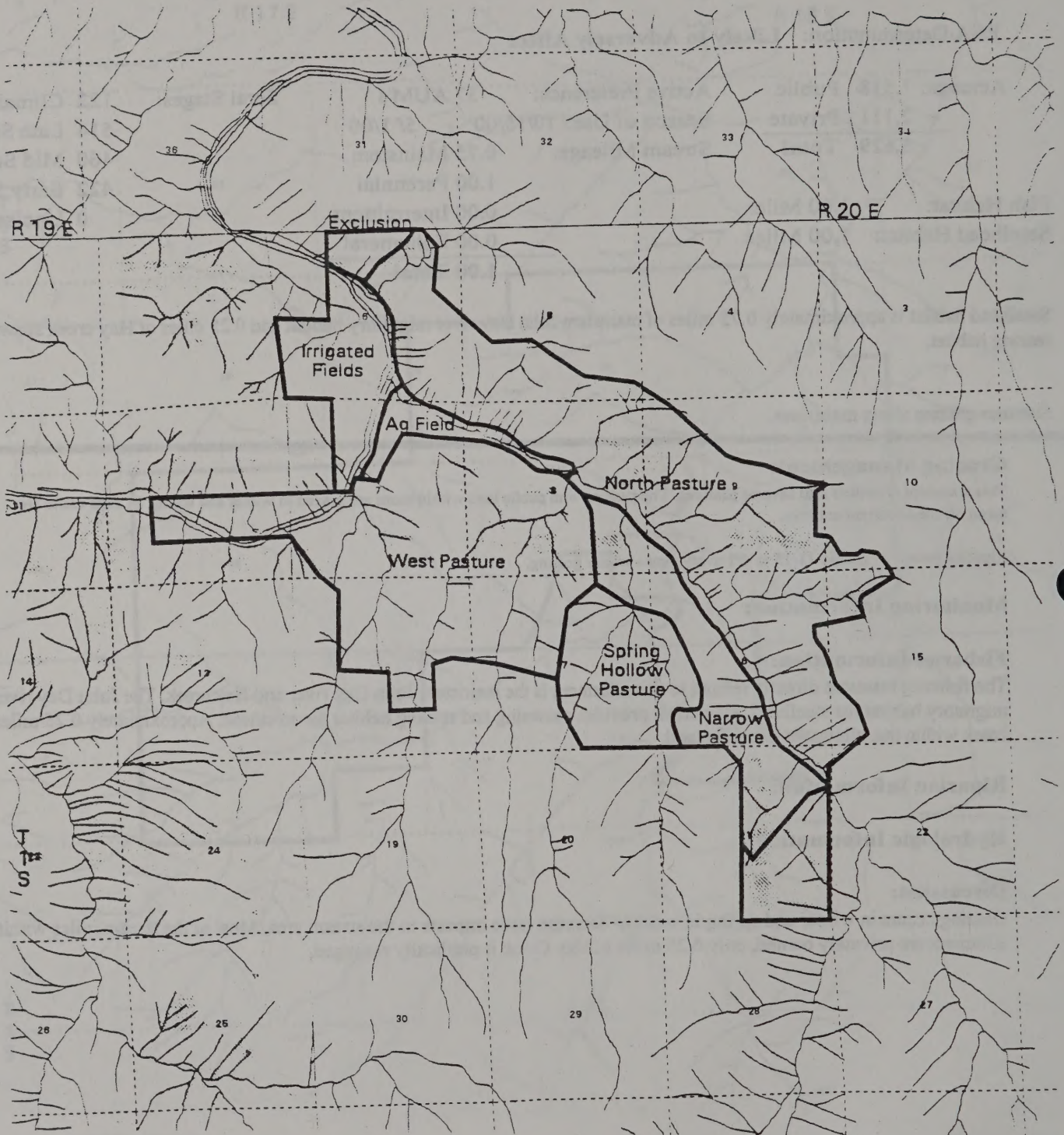
Riparian Information:

Hydrologic Information:

Discussion:

Grazing occurs in winter and spring in order to decrease cattle impacts to the stream area. Most of the stream miles within this allotment are privately owned, only 0.25 miles of Hay Creek is publically managed.

Hay Creek Allotment #02598



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



07 PRYOR FARMS

ESA Determination: **Likely to Adversely Affect**

Acreage: 800 Public	Active Preference: 50 AUM's	Seral Stages: 120 Climax
0 Private	Season of Use: 4/ 1/00 - 11/ 4/00	651 Late Seral
<u>800 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.50 Perennial	0 Early Seral
Fish Habitat: 0.50 Miles	0.00 Intermittent	29 Unclassified
Steelhead Habitat: 0.50 Miles	0.00 Ephemeral	
	<u>0.50 Total</u>	

Habitat for steelhead is spawning and rearing in Hay Creek for approximately 0.5 miles on public land.

Grazing Management:

The grazing system is summer long grazing.

Monitoring Information:

There is one trend study plot within the allotment.

Fisheries Information:

The fisheries resource associated with this allotment is Hay Creek. Hay Creek flows for 0.5 miles across public land within the allotment. This stream has spawning and rearing habitat for steelhead.

Riparian Information:

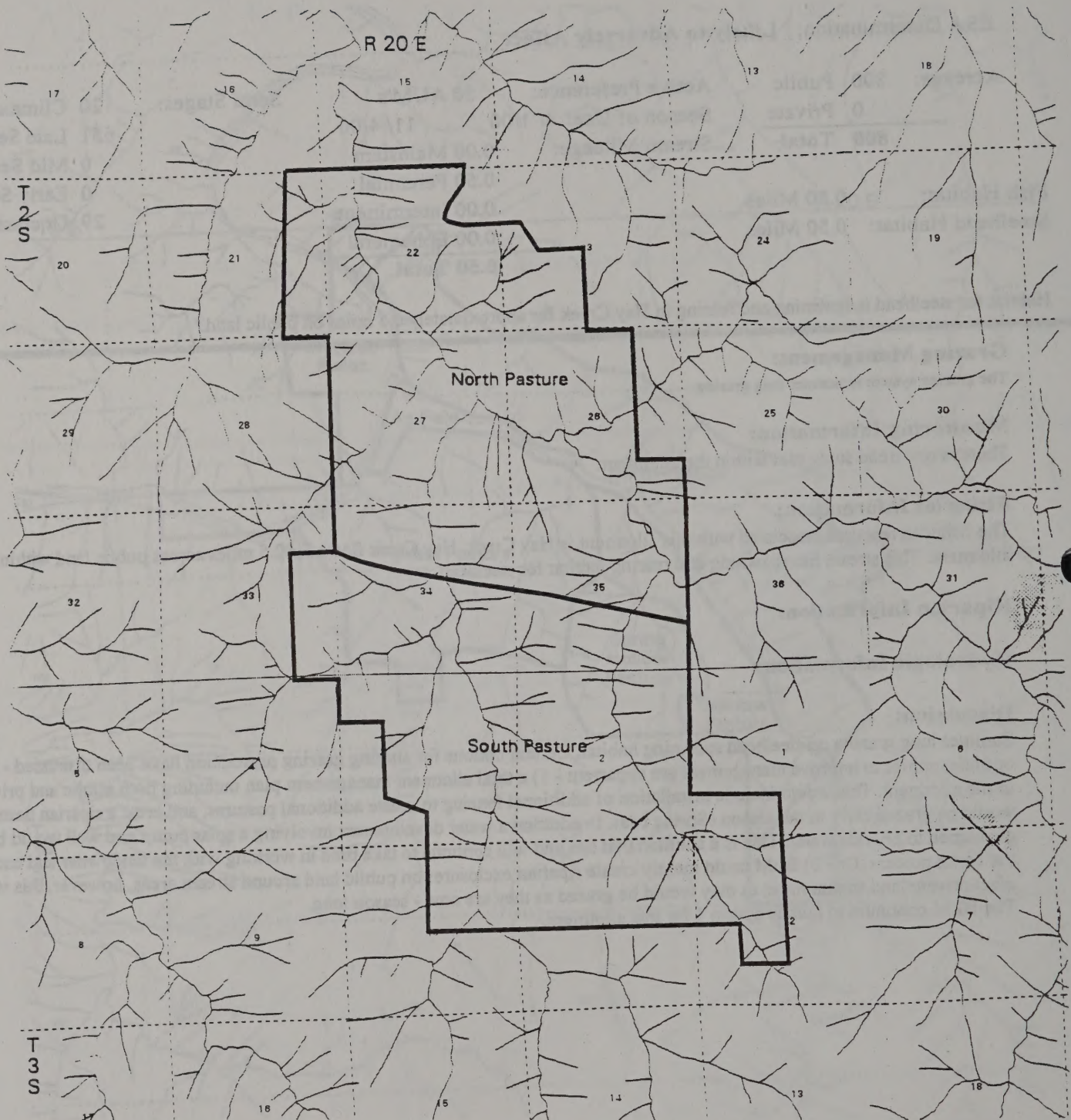
Hydrologic Information:

Discussion:

Summer long grazing on steelhead spawning habitat. Certain options for altering grazing prescription have been discussed - 2 options or philosophies to improve management are apparent - 1) a total allotment management plan including both public and private land in the allotment. This would include installation of additional fencing to create additional pastures, and create a riparian pasture that would be grazed early in the season (Spring use). In addition a water development involving a solar pump and well would be developed to provide water. This is a solution that has and will continue to take time in working with the landowner and completing the entire process. Or - 2) BLM could merely create riparian exclosures on public land around stream areas, however, this would not affect private land stream miles as they would be grazed as they are now - season long.

The BLM continues to pursue option 1 for this allotment.

Pryor Farms Allotment #02607



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



45 CLARK

ESA Determination: **Likely to Adversely Affect**

Acreage: 1,550 Public	Active Preference: 152 AUM's	Seral Stages: 37 Climax
2,417 Private	Season of Use: 4/15/00 - 10/16/00	2,132 Late Seral
3,967 Total	Stream Mileage: 0.00 Mainstem	874 Mid Seral
	3.10 Perennial	776 Early Seral
Fish Habitat: 1.20 Miles	5.60 Intermittent	148 Unclassified
Steelhead Habitat: 1.20 Miles	0.00 Ephemeral	
	8.70 Total	

Grazing Management:

Seven pastures within allotment. Actual use in aUM's in 1988 (184), 1993 (371) and 1996 (250).

Grazing occurs for 1 1/2 months between 6/1-9/1 on all public lands in Lower Birch pasture (W. Fork Birch Creek, E. Fork Birch, and W. Fork Birch).

Grazing occurs from 4/15-5/31 in Rattlesnake pasture T12S, R25E Sec 24 SW1/4NE1/4, SE1/4NW1/4 (Rock Creek)

Livestock access to W. Fork Birch Creek is restricted due to steep topography and streambank vegetation.

Monitoring Information:

Two trend studies, utilization, 1980 riparian and photpoints.

Fisheries Information:

Rock creek (0.4 miles) has poor steelhead fish habitat, a high width to depth ratio, minimal pool habitat and high water temperature in summer. This segment of Rock Creek is considered migratory corridor because high water temperatures from upstream activities makes the creek unsuitable for salmonids. Fish habitat was rated fair in E. Birch Creek (0.2 miles). no fish were observed, presumably because debris jams downstream were blocking access. The stream lacks pools and spawning gravel, good escape cover, instream wood, and good bank stability. W. Birch Creek (1.8 miles in 3 segments) rated between fair and poor for fish habitat. Stream lacked pools, spawning area, pools, and had low escape cover. good amounts of instream wood and canopy cover, mainly from conifers. streambank stability was fair.

Riparian Information:

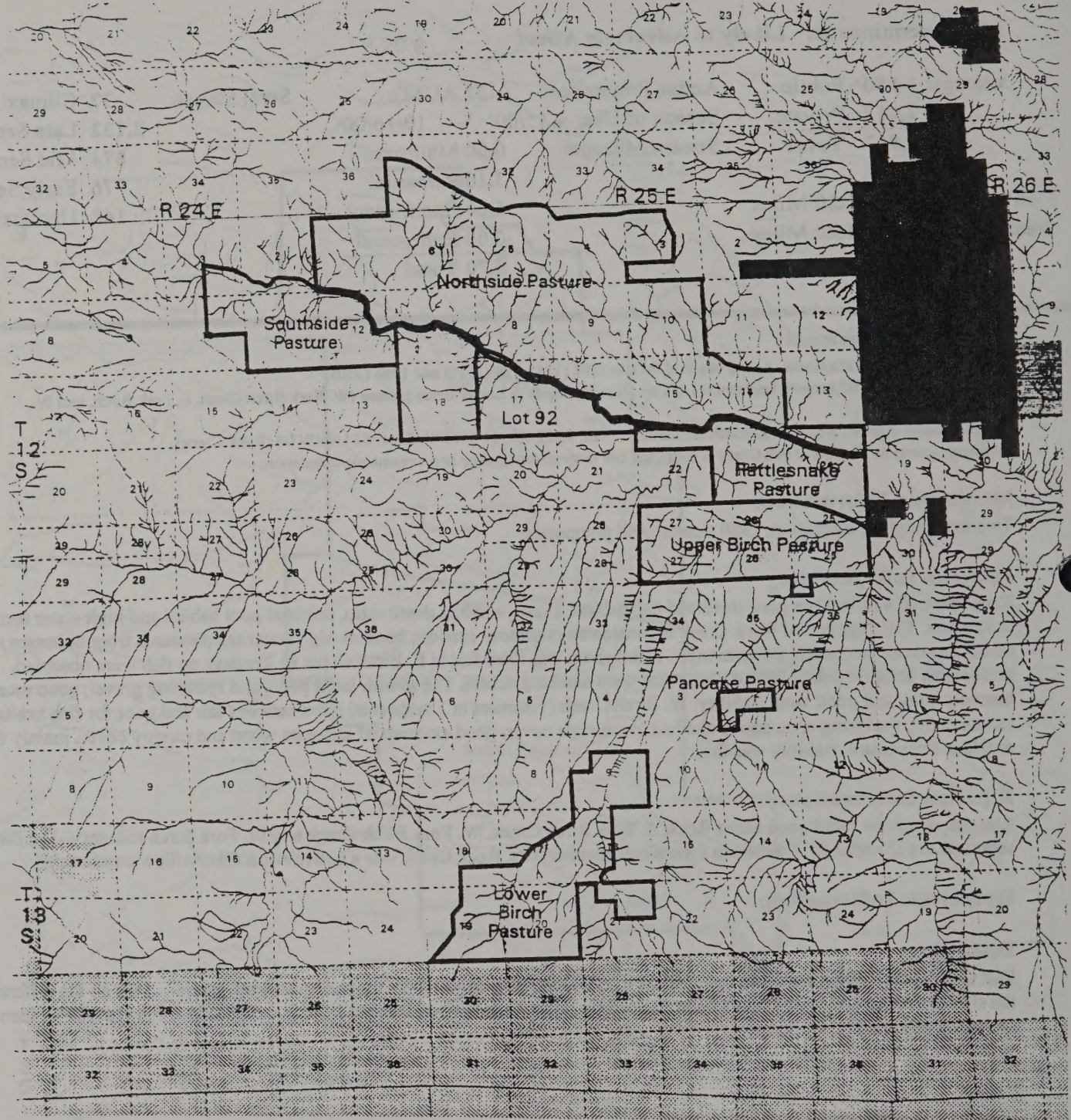
Riparian condition rated good along Rock, E. Fork Birch Creek, W. Fork Birch Creek and W. Fork Birch tributary. The Birch creek segments are Douglas fir, Ponderosa Pine/shrub communities. Rock Creek was a cottonwood/alder/willow community.

Hydrologic Information:

Discussion:

Past timbering and logging activities in the Birch Creek drainage probably have caused most bank erosion areas on the different forks of the stream. Due to poor spawning habitat potential for direct interaction of livestock with a redd is low. Above ODFW identified spawning/rearing on E.F. Birch.

Clark Allotment #02645



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



2 JOHNSON CREEK

ESA Determination: **Likely to Adversely Affect**

Acreage: 7,698 Public	Active Preference: 436 AUM's	Seral Stages:	0 Climax
11,140 Private	Season of Use: 4/ 1/00 - 11/15/00		0 Late Seral
<u>18,838 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	2.00 Perennial		0 Early Seral
Fish Habitat: 1.60 Miles	11.50 Intermittent		0 Unclassified
Steelhead Habitat: 1.60 Miles	0.00 Ephemeral		
	<u>13.50 Total</u>		

Grazing Management:

Actual use in AUM's for 1987 (950), 1990 (641), 1991 (1040), 1992 (574), 1994 (539), 1997(303). Average 726 AUM's.

4/15-5/31 T9S, R26E sec 31 E1/2 SW1/4 (John Day River)

4/15-5/31 T9S R25E Sec 26 NE1/4SW1/4. NW1/4SE1/4 (China Hat Creek)

6/1-7/15 T10S. R25E Sec 4 SW1/4NE1/4. Sec 21 E1/2NW1/4.SW1/4SW1/4. Sec 28 NW1/4NW1/4.W1/2SW1/4. Sec 32 NE1/4SW1/4 (Johnson Creek)

6/1-7/15 T10S R25E Sec 7 NW1/4NE1/4. Sec 18 N1/2NW1/4 (Hide and Seek Creek)

Monitoring Information:

One trend study, utilization, Johnson Creek: physical survey, instream habitat survey, riparian habitat survey.

Fisheries Information:

Johnson creek (1.3 miles within 5 segments of public land) was surveyed in 1980. Stream habitat and channel stability was rated as good. This rating was determined because of dense conifer stands lining the streambanks, good amounts of large instream wood, large substrate material (2% bedrock, 10% large boulders, 20% small boulders, 35% cobble), and good stream shade from conifers. Spawning substrate was limited. China Hat Creek has poor fish habitat and no known utilization by steelhead.

Riparian Information:

1980 survey rated riparian condition as good on Johnson Creek. Photos revealed that livestock use was heavy and that some bank trampling had occurred. Johnson Creek flows through a deep, densely forested canyon. dominant riparian species were pine grass, douglas fir, mosses, dock, nettles, grand fir, currant, and gooseberry. Hide and Seek Creek (0.7 miles in two segments) goes dry in summer months and does not support steelhead populations. dominant vegetation included bluegrass, douglas fir, juniper, pinegrass. China Hat Creek 1.3 miles is degraded in condition, mainly from cattle grazing, riparian area heavily grazed.

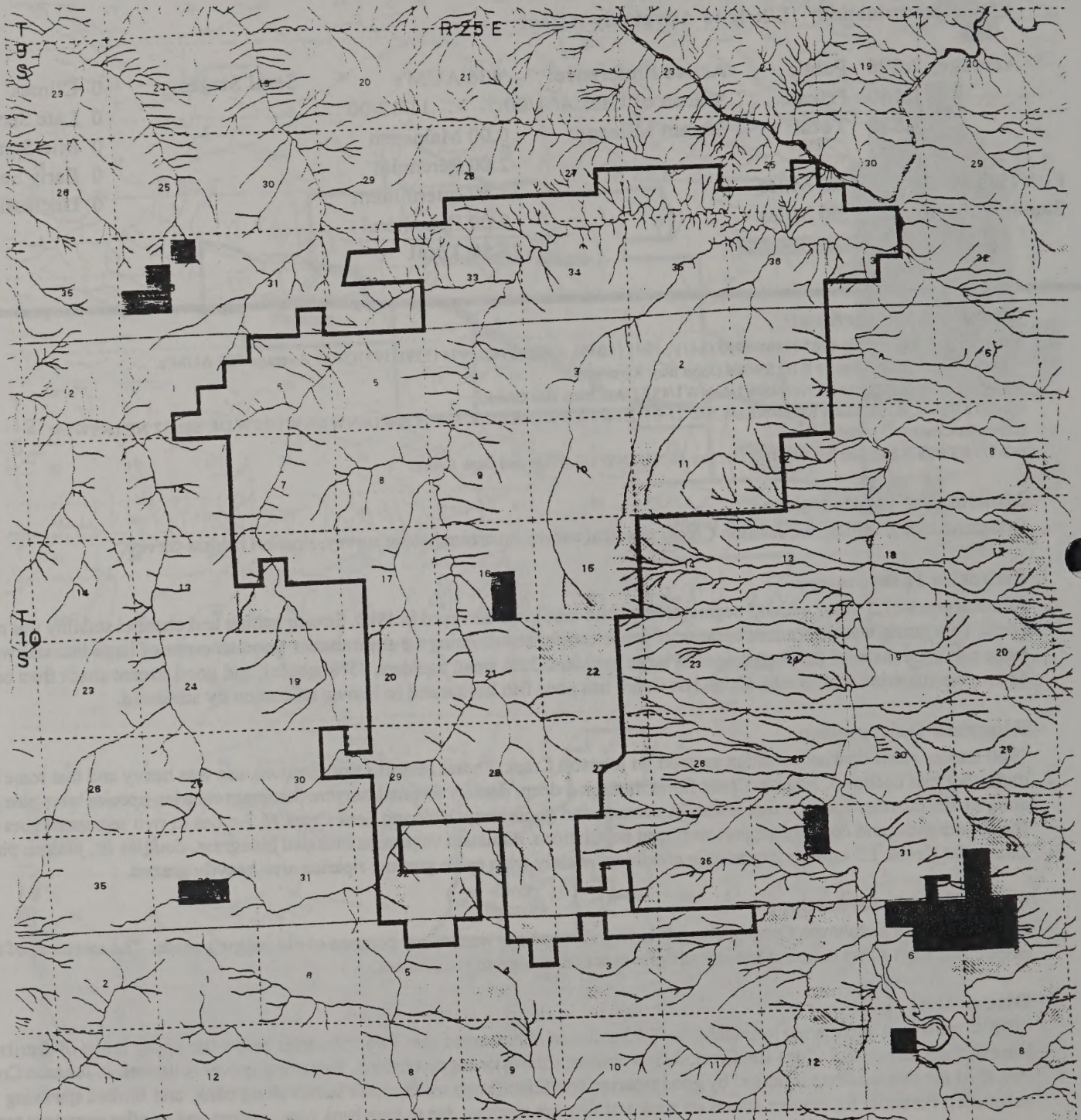
Hydrologic Information:

Stream gradient in Johnson Creek is about 5%. High flows have washed out portions of old logging roads. The steepness of the stream and high flows seems to prevent silt/gravel accumulation in the channel.

Discussion:

ODFW spawning and rearing map identifies 0.75 miles of documented use. Two tributaries below the upper limits of distribution, Hide & Seek Creek and China Hat Creek do not maintain flows or support habitat. Spawning gravel is limited in Johnson Creek. Potential for direct effects is limited by good riparian condition (large wood, dense stands along bank, and limited spawning substrate). Potential for indirect effects on bank stability are minimal due to high bank rock content and conifer overstory component.

Johnson Creek Allotment #02662



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



16 DIXIE

ESA Determination: **Likely to Adversely Affect**

Acreage: 2.548 Public	Active Preference: 319 AUM's	Seral Stages: 0 Climax
13,150 Private	Season of Use: 6/ 1/00 - 10/31/00	0 Late Seral
15,698 Total	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	5.70 Perennial	0 Early Seral
Fish Habitat: 4.60 Miles	2.70 Intermittent	0 Unclassified
Steelhead Habitat: 4.60 Miles	0.00 Ephemeral	
	<u>8.40 Total</u>	

Grazing Management:

There are two pastures. Pastures are grazed starting 6/1-7/15, the second pasture is then grazed from 7/16-10/15. The order the pastures are grazed is reversed each year. There are 9600 acres of National Forest lands and 3550 acres of private lands within the allotment. Actual use since 1992 has been between 130-220 AUM's.

Monitoring Information:

Utilization, riparian photopoints, 2 trend studies. 1981 riparian habitat inventory. 1989 riparian habitat inventory. 2 water temperature monitoring sites. Dixie and Standard meet state water quality standards. Standard, Dixie and Comer creeks rated as good for habitat and bank stability.

Fisheries Information:

Good fish habitat for steelhead exists in Dixie (2.4 miles), Standard (1.1 miles) West Fork Standard (0.9) and Comer Creeks (0.2 miles). Water quality is good (cold and clear). Large instream wood is common, riparian vegetation provides good cover, streambanks are stable and well vegetated. Past mining activities have increased levels of fine sediment in Dixie and Standard creeks however. Low summer stream flows in Dixie and Standard creek (below irrigation diversions) are the most limiting factor affecting steelhead habitat in this allotment. Dixie, Standard, W. Fork Standard and Comer creeks are spawning/rearing habitat for steelhead and Westslope cutthroat trout.

Riparian Information:

Riparian habitat in Standard and Dixie creek is in proper functioning condition. Stream flow through heavily forested areas. Many dogwoods, alders, willows and pine trees grow along the banks. In addition the understory provides nearly 100% coverage with bearberry, strawberry, clover, horsetails, other forbes and grasses.

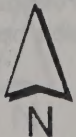
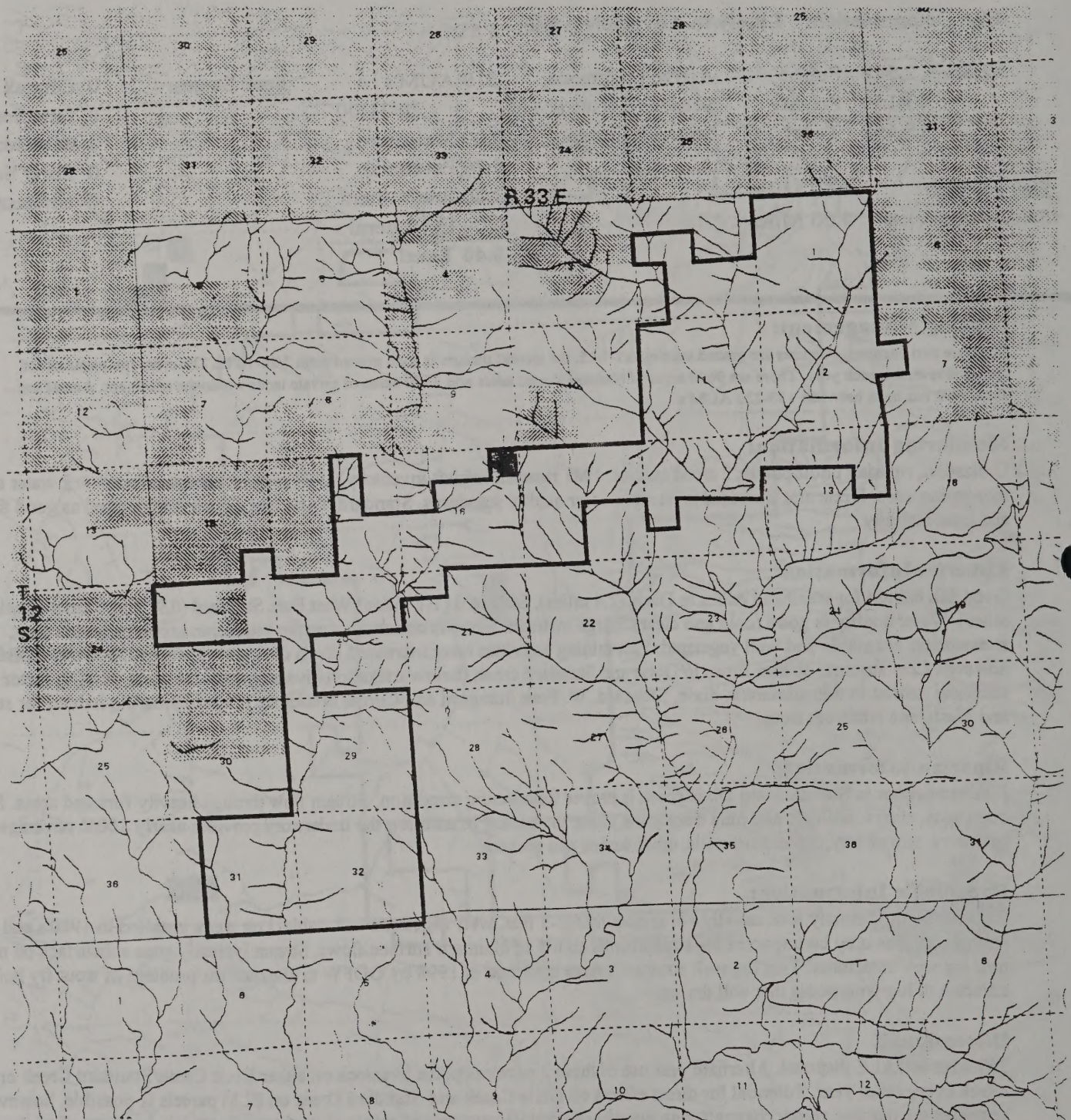
Hydrologic Information:

Streambanks are mostly low, usually not greater than 2-5 feet, well vegetated and stable. Log weirs installed in 1980's and past mining activities may be impacted the streambanks ability to maintain surface flows. Stream typically goes subsurface on most years near log weir structures. Two log weir structures were breached in 1998 by ODFW to alleviate the problem of trout fry being attracted to log weir pools that will dry up.

Discussion:

360 acres NOALE disposal. Alternate year use of these 2 pastures place livestock on either Dixie Creek/Standard Creek or Bear Creek every other year. Potential for direct effects on Dixie Creek and Standard Creek on BLM parcels is possible, however, most segments are narrow, rocky channels with good hardwood vegetation and minimal vegetated floodplain because of mining. Lives do not tend to remain in riparian zone. Bear Creek has approximately 0.2 miles of spawning habitat on BLM land. Potential for direct effects are possible if spawning occurs in this segment. Floodplain is wide and potential for indirect effects are possible because of bank stability and riparian vegetation.

Dixie Allotment #04016



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



20 MURDERERS CREEK

ESA Determination: **Likely to Adversely Affect**

Acreage: 16,004 Public	Active Preference: 860 AUM's	Seral Stages: 0 Climax
18,239 Private	Season of Use: 4/20/00 - 9/20/00	13 Late Seral
<u>34,243 Total</u>	Stream Mileage: 0.00 Mainstem	52 Mid Seral
	7.60 Perennial	33 Early Seral
Fish Habitat: 5.90 Miles	48.00 Intermittent	2 Unclassified
Steelhead Habitat: 5.90 Miles	0.00 Ephemeral	
	<u>55.60 Total</u>	

Grazing Management:

Approximately 16,000 acres of ODFW land is within the allotment and is managed with the BLM lands. Elevation in the allotment range from 2600 to 5200 feet and therefore different grazing applications are needed to meet plant physiology. There are three riparian pastures which receive livestock use from 5/1-5/20 for two years and are then rested the third year. There are six upland pastures that in a three year sequence receive a use during the critical growing season, a use after the critical growing season (deferment) and then a complete rest. The grazing season for these six pastures is 5/1-6/1 or 5/20-7/1. Four pastures in the area are used in a deferred rotation in which they are only used once during the critical growing season and then are used either before or after the critical season for three more years. The season of use here is from 4/20-9/20.

Monitoring Information:

Flat Creek and Bridge Creek each have three transect locations which measure: % bank covered by woody vegetation, canopy layering, open canopy, average vegetation height, # of woody species and, stream cover percentage. Bridge creek has one transect location which also measures all of the above. Water temperatures were monitored in 1993 and 1998. Air temperatures were also taken in 1998. There is also a lot of upland monitoring in this allotment. Water temperature data (SFJDR, Murderers Creek). 1979 1990 riparian photopoints on SFJDR.

Fisheries Information:

Steelhead spawning/rearing habitat exists in the SFJDR, Murderers, Cabin, Flat creek and potentially in Cougar Gulch. Physical habitat for steelhead trout in the SFJDR (2.6 miles within 3 segments) is good, but water quality problems (temperature, and high sediment levels) impair production potential. Murderers creek has good habitat for steelhead trout, with good cover from vegetation, substrate, and instream wood. Cougar Gulch has marginal spawning/rearing habitat for steelhead, limited by intermittent summer flows. Elevated water temperatures in the SFJDR in the allotment appear to be from cumulative sources. No information about habitat in Cabin or Flat creeks.

Riparian Information:

The riparian zone of the SFJDR has shown improvement at each photopoint between 1979 and 1990, and is in proper functioning condition. It has a diverse vegetative community and age structure. Riparian condition is good along Murderers creek, with diverse vegetation composition and good vegetative cover on stream banks. No information about riparian condition of Flat, Cabin, Oliver Tunnel and Johnson Creeks. Cougar Gulch has a patchy overstory of cottonwoods and fair vegetative community along its banks, consisting of willows, dogwood and shrubs. Within the allotment are the following miles of streams SFJDR (2.6), Murderers (0.5) Cabin (0.6), Flat (0.6), Oliver (1.0), Tunnel (0.2), and Johnson (0.5) and Cougar Gulch (1.6).

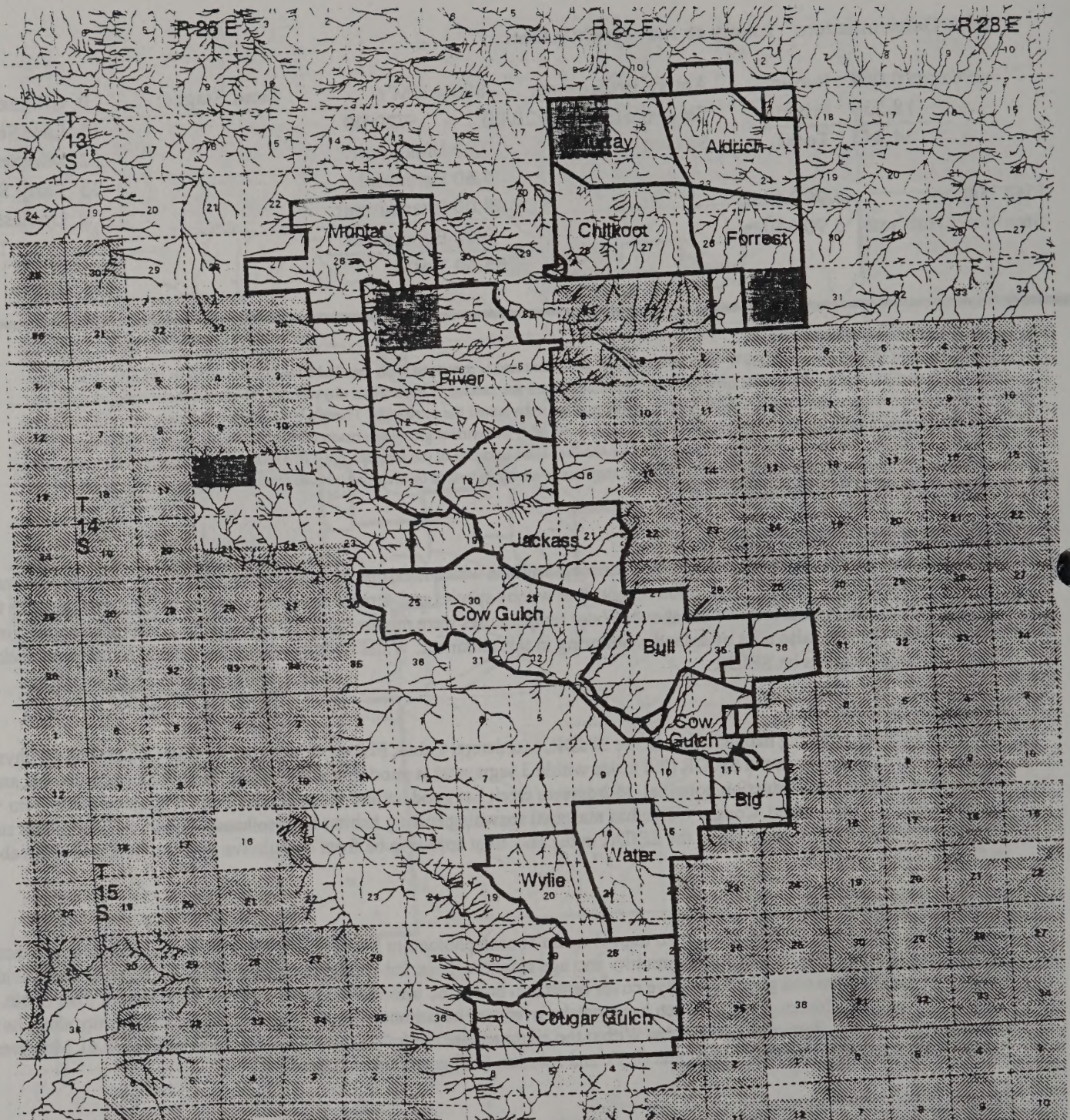
Hydrologic Information:

No excessive erosion has been noted along upland slopes, streambanks or terraces.

Discussion:

Very little livestock use occurs along the SFJDR in this allotment. Most of the SFJDR is exclosed and all of Murderers Creek is exclosed. Because of fencing excluding livestock on Murderers Creek and most of the SF John Day River, the likelihood of direct effects are minimal. Likewise exclusion of livestock will limit potential for indirect effects.

Murderers Creek Allotment #04020



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



329 NORTH FORK

ESA Determination: **Likely to Adversely Affect**

Acreage: 1,894 Public	Active Preference: 316 AUM's	Seral Stages:	0 Climax
5,505 Private	Season of Use: 5/ 1/00 - 5/31/00		0 Late Seral
<u>7,399 Total</u>	Stream Mileage: 5.75 Mainstem		0 Mid Seral
	5.75 Perennial		0 Early Seral
Fish Habitat: 5.75 Miles	1.60 Intermittent		0 Unclassified
Steelhead Habitat: 5.75 Miles	0.00 Ephemeral		
	<u>7.35 Total</u>		

Grazing Management:

Grazing is permitted from April 1 to May 31 each year on two pastures. Actual grazing use information from 1988-1999 is filed. Use on public lands varied from 44 to 196 AUM's.

Monitoring Information:

Riparian photpoints on the NFJDR, Mallory and Potamus Creeks. Grazing utilization study cage. Peak crest gauges in Mallory and Potamus Creeks. continuous temperature recorder in the N.F. John Day River at Wrightman Canyon Bridge.

Fisheries Information:

The NFJDR contains winter rearing habitat for juvenile steelhead trout. Potamus and Mallory Creeks are considered spawning/rearing habitat for steelhead trout. Migratory habitat for bull trout and rearing habitat for juvenile chinook salmon exist in the NFJDR. Nongame fish species present include, northern squawfish, suckers, dace and minnows. Resident redband trout are present in the NFJDR, Potamus and Mallory Creeks year round.

Riparian Information:

Riparian condition appears to be improving since grazing treatment was modified to spring use only in 1996. Understory vegetation has been slow to establish in some areas due to rocky or cut streambanks. The NFJDR, Potamus and Mallory creeks were assessed functioning at risk in 1995.

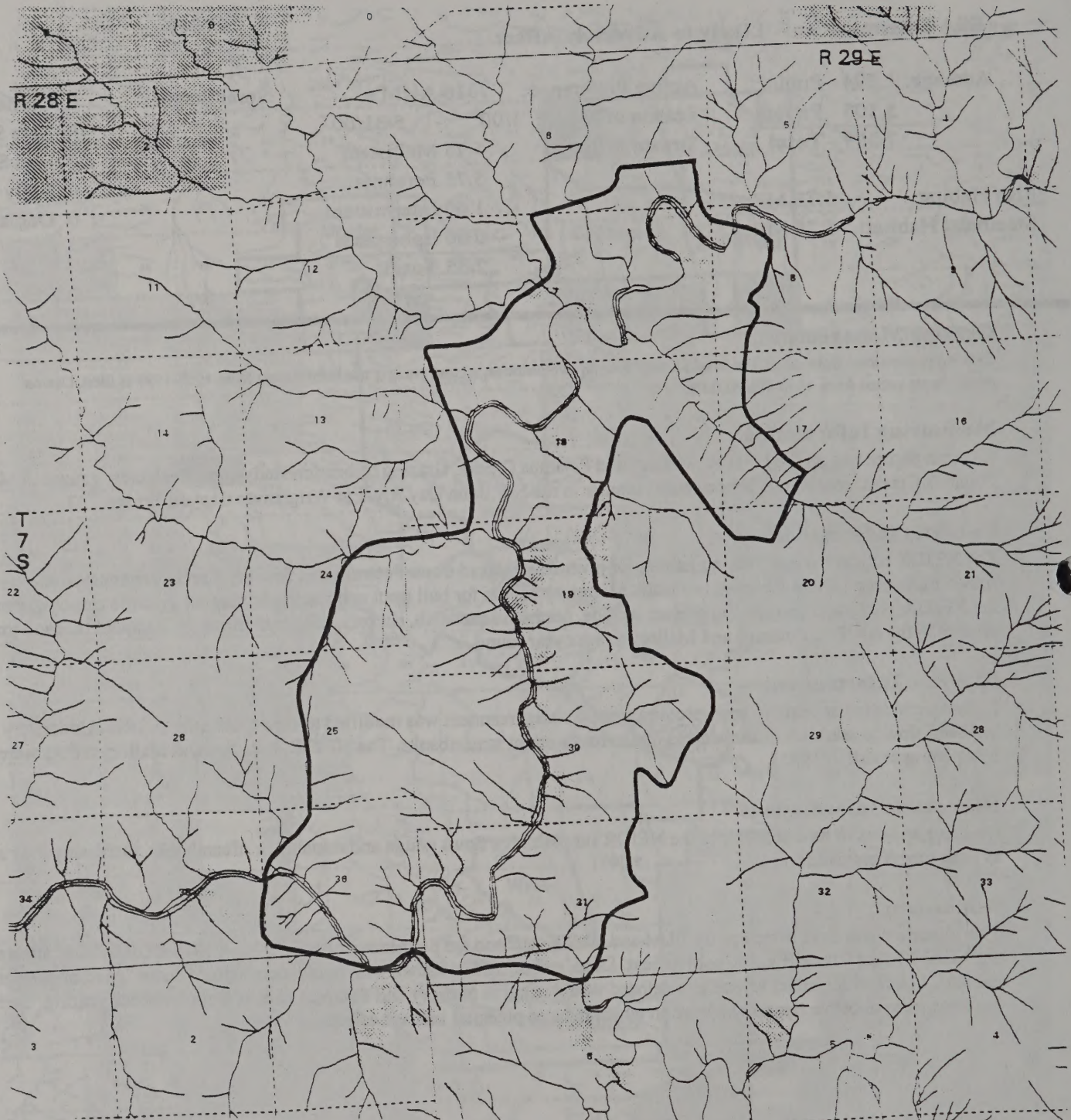
Hydrologic Information:

Ice scour appears to be a problem in the NFJDR subbasin. Ice flows gouge and destabilize streambanks, increasing their susceptibility to peak runoff erosive forces.

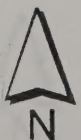
Discussion:

This allotment was field reviewed by BLM and NMFS staff and the permittee in April 1994. A 1975 ODFW/BLM stream survey of the NFJDR noted 93% riffle, 7% pool habitat. Deep, narrow riffles strewn with boulders contained some "good or excellent trout habitat". Potential for direct effects to steelhead would occur in Mallory and Potamus Creeks from livestock grazing. Early season use appears to improve riparian vegetation which reduces potential indirect effects.

North Fork Allotment #04029



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



12 JOHNNY CAKE MTN.

ESA Determination: **Likely to Adversely Affect**

Acreage: 280 Public	Active Preference: 30 AUM's	Seral Stages: 0 Climax
1,000 Private	Season of Use: 4/ 1/00 - 11/30/00	0 Late Seral
<u>1,280 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	1.20 Perennial	0 Early Seral
Fish Habitat: 2.20 Miles	0.60 Intermittent	0 Unclassified
Steelhead Habitat: 1.20 Miles	0.00 Ephemeral	
	<u>1.80 Total</u>	

Grazing Management:

Public lands along the NFJDR and Cabin Creek are grazed from 4/1 to 5/31.

Monitoring Information:

Riparian photopoint on Cabin Creek and NFJDR established 1998. Riparian photopoint established 1996 NFJDR. In 1996 up and downstream riparian photos were taken every 1/4 mile on Cabin Creek.

Fisheries Information:

Winter rearing habitat for juvenile steelhead and migratory bull trout habitat in NFJDR. Steelhead spawning/rearing habitat in Cabin Creek. Resident redband and nongame species in NFJDR and Cabin Creek.

Riparian Information:

Riparian condition is good on Cabin Creek. Willows dominate, hawthorne, syringa, juniper, cottonwood and ponderosa pine also present. Sedges, rushes common also. Riparian component appears to be improving along NFJDR.

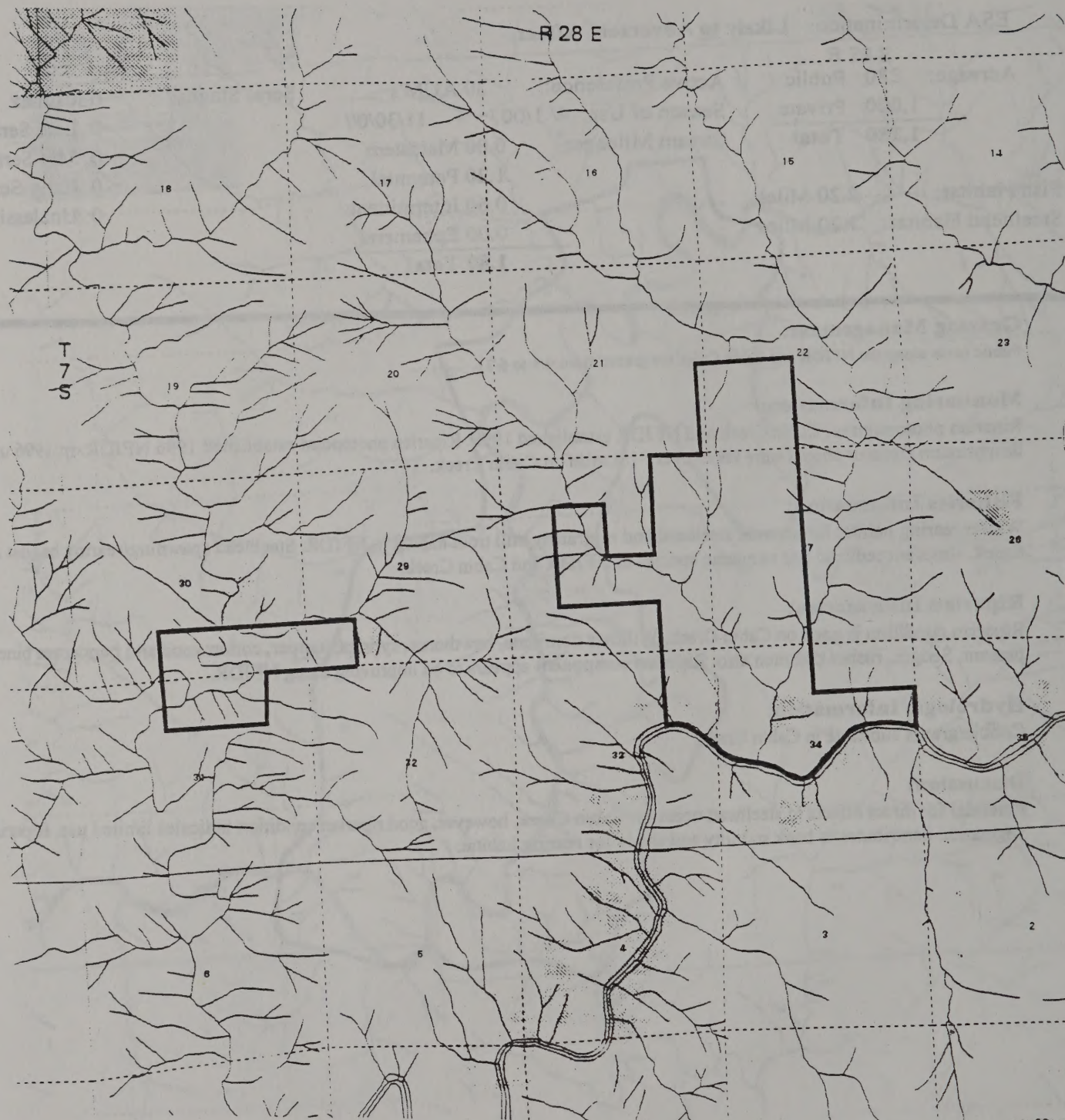
Hydrologic Information:

Cobble/gravel substrate in Cabin Creek.

Discussion:

Potential for direct effects to steelhead occur on Cabin Creek, however, good riparian condition indicates limited use. Riparian vegetation contributes to bank stability and shade for rearing habitat.

Johnny Cake Mountain Allotment #04042



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



15 BEAR GULCH

ESA Determination: **Likely to Adversely Affect**

Acreage:	74 Public	Active Preference:	9 AUM's	Seral Stages:	0 Climax
	112 Private	Season of Use:	5/ 1/00 - 6/15/00		0 Late Seral
	186 Total	Stream Mileage:	0.00 Mainstem		0 Mid Seral
			0.10 Perennial		0 Early Seral
Fish Habitat:	0.10 Miles		0.00 Intermittent		0 Unclassified
Steelhead Habitat:	0.10 Miles		0.00 Ephemeral		
			0.10 Total		

Grazing Management:

Season of use changed to 5/1 to 6/15 in 1998.

Monitoring Information:

Trend study, utilization study and actual use for 1993 and 1996.

Fisheries Information:

Pine Creek is in fair to good condition. Cattle have caused some streambank destabilization, increasing cut banks and erosion. Pine Creek provides spawning/rearing habitat for steelhead, redband and westslope cutthroat trout. Bear Gulch is also in good condition

Riparian Information:

Good riparian species composition, alders, wild rose, pine, willows.

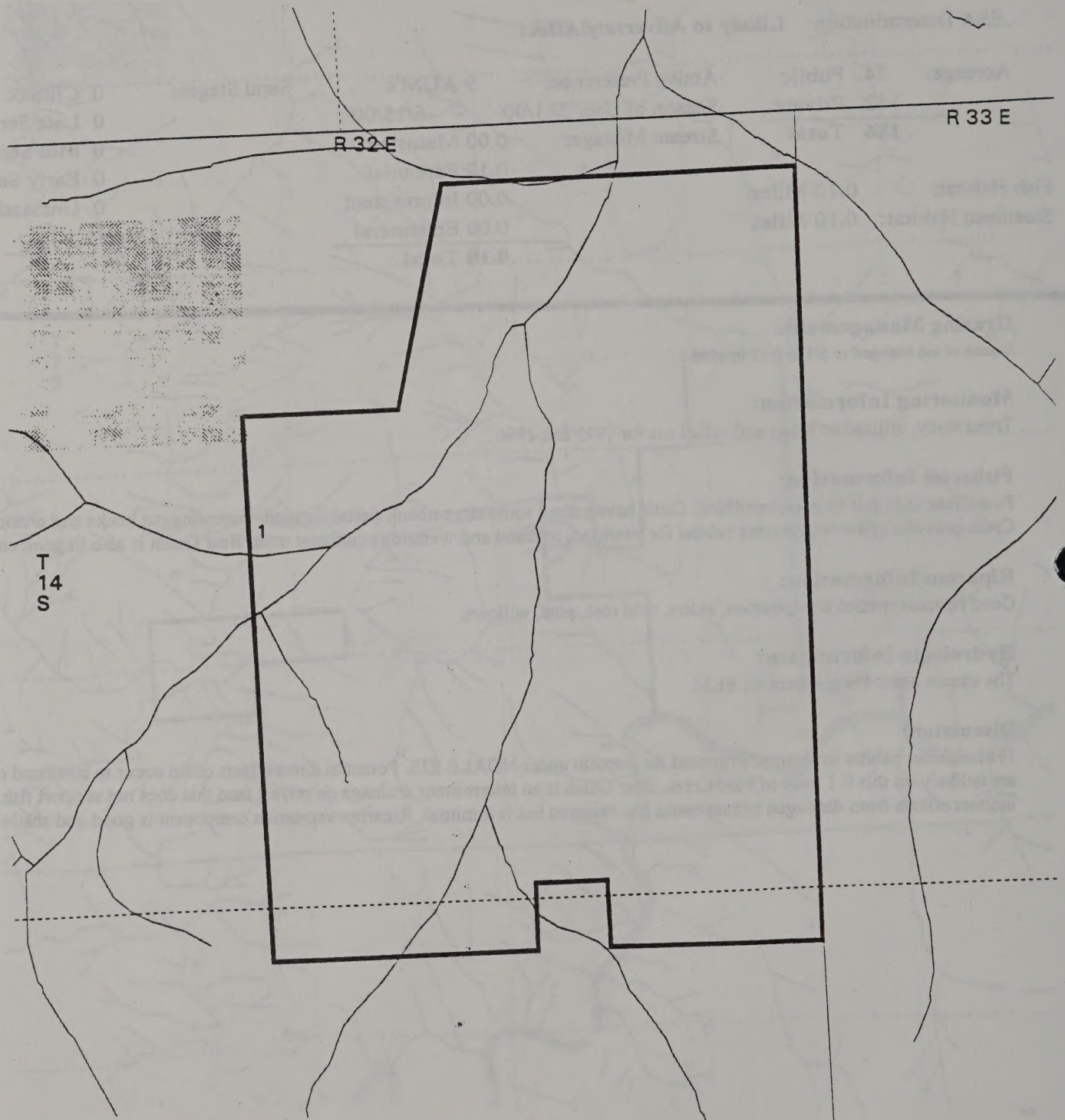
Hydrologic Information:

The stream has a 4% gradient on BLM.

Discussion:

1981 riparian habitat inventory. Proposed for disposal under NOALE EIS. Potential direct effects could occur to steelhead redds but are unlikely on this 0.1 mile of Pine Creek. Bear Gulch is an intermittent drainage on private land that does not support fish. Some indirect effects from damaged stream banks has occurred but is minimal. Riparian vegetation component is good and shade adequate.

Bear Gulch Allotment #04045



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



046 THREE MILE

ESA Determination: **Likely to Adversely Affect**

Acreage: 40 Public	Active Preference: 8 AUM's	Seral Stages: 0 Climax
2,214 Private	Season of Use: 4/ 1/00 - 5/31/00	0 Late Seral
<u>2,254 Total</u>	Stream Mileage: 0.25 Mainstem	0 Mid Seral
	0.40 Perennial	0 Early Seral
Fish Habitat: 0.40 Miles	0.00 Intermittent	0 Unclassified
Steelhead Habitat: 0.40 Miles	<u>0.00 Ephemeral</u>	
	0.40 Total	

Grazing Management:

Season of use changed in 1998 to 4/1 to 5/31 on Long Creek and MFJDR.

Monitoring Information:

Trend and utilization study.

Fisheries Information:

Long Creek supports spawning and rearing habitat for steelhead/redband trout. MFJDR supports winter rearing for juvenile steelhead trout.

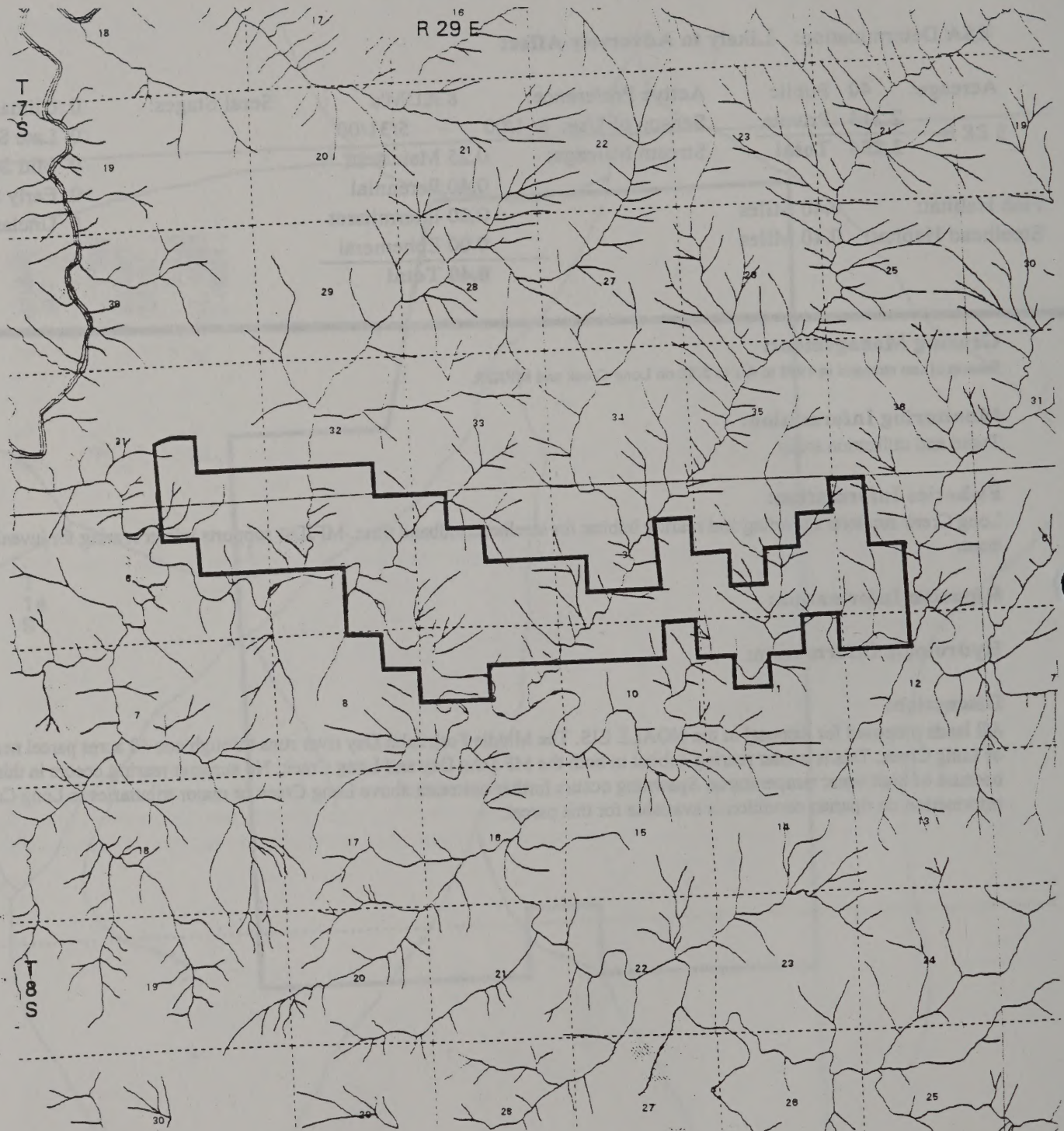
Riparian Information:

Hydrologic Information:

Discussion:

All lands proposed for disposal in the NOALE EIS. The Middle Fork John Day river runs through one 40 acres parcel near the mouth of Long Creek. This is winter rearing habitat in both the MF John Day and Long Creek. No summer rearing occurs in this area because of high water temperatures. Spawning occurs further upstream above Long Creek or major tributaries to Long Creek. No information on riparian condition is available for this parcel.

Three Mile Allotment #04046



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



52 BIG BALDY

ESA Determination: **Likely to Adversely Affect**

Acreage: 12.726 Public	Active Preference: 600 AUM's	Seral Stages: 0 Climax
3,346 Private	Season of Use: 4/15/00 - 5/31/00	28 Late Seral
<u>16,072 Total</u>	Stream Mileage: 3.50 Mainstem	42 Mid Seral
	11.80 Perennial	26 Early Seral
Fish Habitat: 4.40 Miles	19.00 Intermittent	4 Unclassified
Steelhead Habitat: 4.40 Miles	0.00 Ephemeral	
	<u>30.80 Total</u>	

Grazing Management:

Two pastures in allotment, North and South. On odd years (1999) the North pasture is rested and the South pasture is grazed. On even years (2000) the sequence is reversed. This grazing sequence has been followed since 1990. Actual use has varied from 150 to 530 AUM's, averaging 375 AUM's.

Monitoring Information:

Riparian photopoints, utilization studies, actual use since 1989, trend studies, water temperature data loggers in Deer and Sunflower Creeks and the SFJDR. Riparian habitats inventoried in 1980 and repeated in 1990.

Fisheries Information:

Good fish habitat for steelhead and redband trout exist throughout the allotment. In the North Pasture steelhead spawning/rearing habitat exists in Deer Creek and the SFJDR up to the South Fork Falls. Steelhead distribution does not reach the South pasture. The falls are a passage barrier to steelhead trout. Redband trout habitat overlaps steelhead distribution in the SFJDR and Deer Creek, and they also inhabit Sunflower, Indian and Wildcat creeks, and the SFJDR above the falls. Water quality problems that occur in this allotment are high water temperature and unnaturally high fine sediment levels. Sources upstream of this allotment appear to be the main cause of these problems, particularly for the SFJDR.

Deer Creek riparian vegetation is extremely thick in most areas and poses a significant barrier to cattle, in addition the large boulder substrate and steep gradient of most stretches of the stream further discourage cattle entry. Small portions of the stream on public lands are less vegetated and less steep, cattle usage in these areas is greater. It is unlikely that cattle can access most of the potential spawning and rearing habitats along Deer Creek.

Riparian Information:

Riparian conditions are good to excellent on all streams in the allotment, continuing an upward trend. Various spot problems exist where riparian vegetation is suppressed from livestock use, but these are minor in relation to the entire allotment. Roads adjacent to Sunflower, Deer and Indian Creeks, and the SFJDR do limit riparian potential in areas and potentially increase levels of fine sediments into these streams.

The riparian zone is in proper functioning condition on the SFJDR, and functioning at risk on Deer, Indian, and Sunflower Creeks.

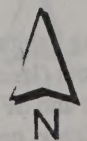
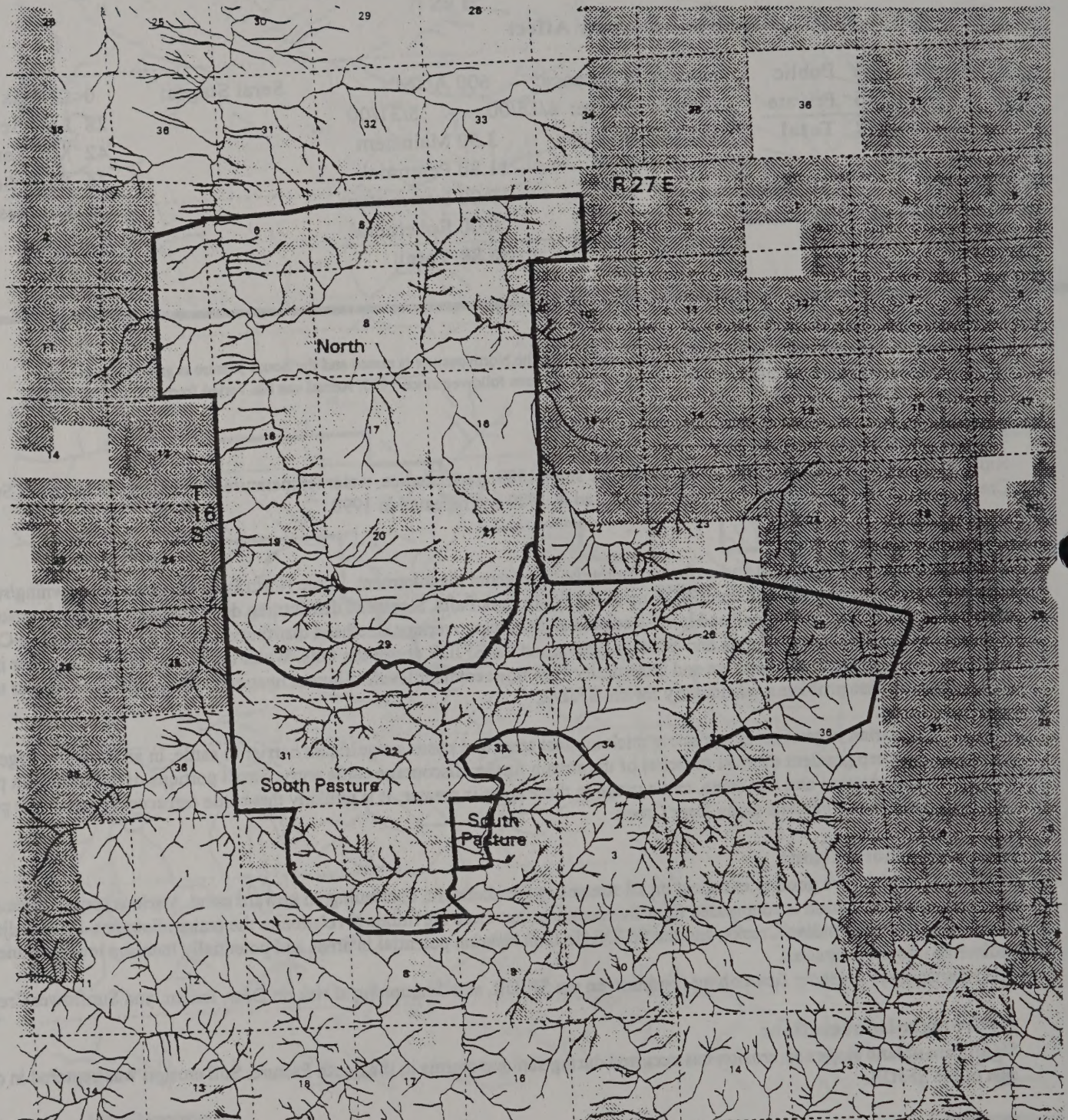
Hydrologic Information:

Significant upland slope soil erosion has occurred during summer storms in the South Pasture. Soil erosion was centered in dry draws east of the SFJDR.

Discussion:

The North pasture of this allotment will be rested in 1999. The North pasture contains steelhead spawning and rearing habitat, but South pasture is redband trout habitat only. Streams in this allotment are upstream of a natural barrier to steelhead trout (Izee Falls the SF John Day River), and are occupied by redband trout and non-game species only. Every other year Deer Creek and SF John Day have potential for direct effects in North Pasture. Spawning generally occurs above BLM on FS lands on Deer Creek, narrow channel, heavy vegetation, and boulder substrate make potential for direct effects unlikely in lower reach. Indirect effects are likely low on Deer Creek. Water quality concerns are greater for Indian and Sunflower Creek which occur above Izee falls.

Big Baldy Allotment #04052



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



6 POINTER

ESA Determination: **Likely to Adversely Affect**

Acreage:	85 Public	Active Preference:	12 AUM's	Seral Stages:	0 Climax
	190 Private	Season of Use:	5/ 1/00 - 6/15/00		0 Late Seral
	<u>275 Total</u>	Stream Mileage:	0.00 Mainstem		0 Mid Seral
			0.60 Perennial		0 Early Seral
Fish Habitat:	0.60 Miles		0.00 Intermittent		0 Unclassified
Steelhead Habitat:	0.60 Miles		0.00 Ephemeral		
			<u>0.60 Total</u>		

Grazing Management:

Grazing season adjusted to 5/1-6/15 in 1998. Grass coverage is good, and it does not appear that livestock have grazed along the stream for years.

Monitoring Information:

None, other than field assessment of general condition.

Fisheries Information:

This section of Little Pine Creek (0.6 miles) has good fish habitat although the stream is small (2-4' wide). Sedimentation from adjacent roads is affecting spawning substrates. Water temperatures likely meet state standards, as observed from spot checks in mid August (low 60's). Westslope cutthroat trout utilize the stream for spawning and rearing. Little Pine Creek is a known steelhead spawning/rearing stream. Instream wood is fairly common.

Riparian Information:

Riparian habitat of Little Pine Creek is good with a dense shrub understory (alders) and moderately dense overstory of mature pine and fir trees. Riparian condition is likely close to proper functioning condition. Streambanks are well vegetated with grass and forbs quite stable.

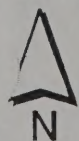
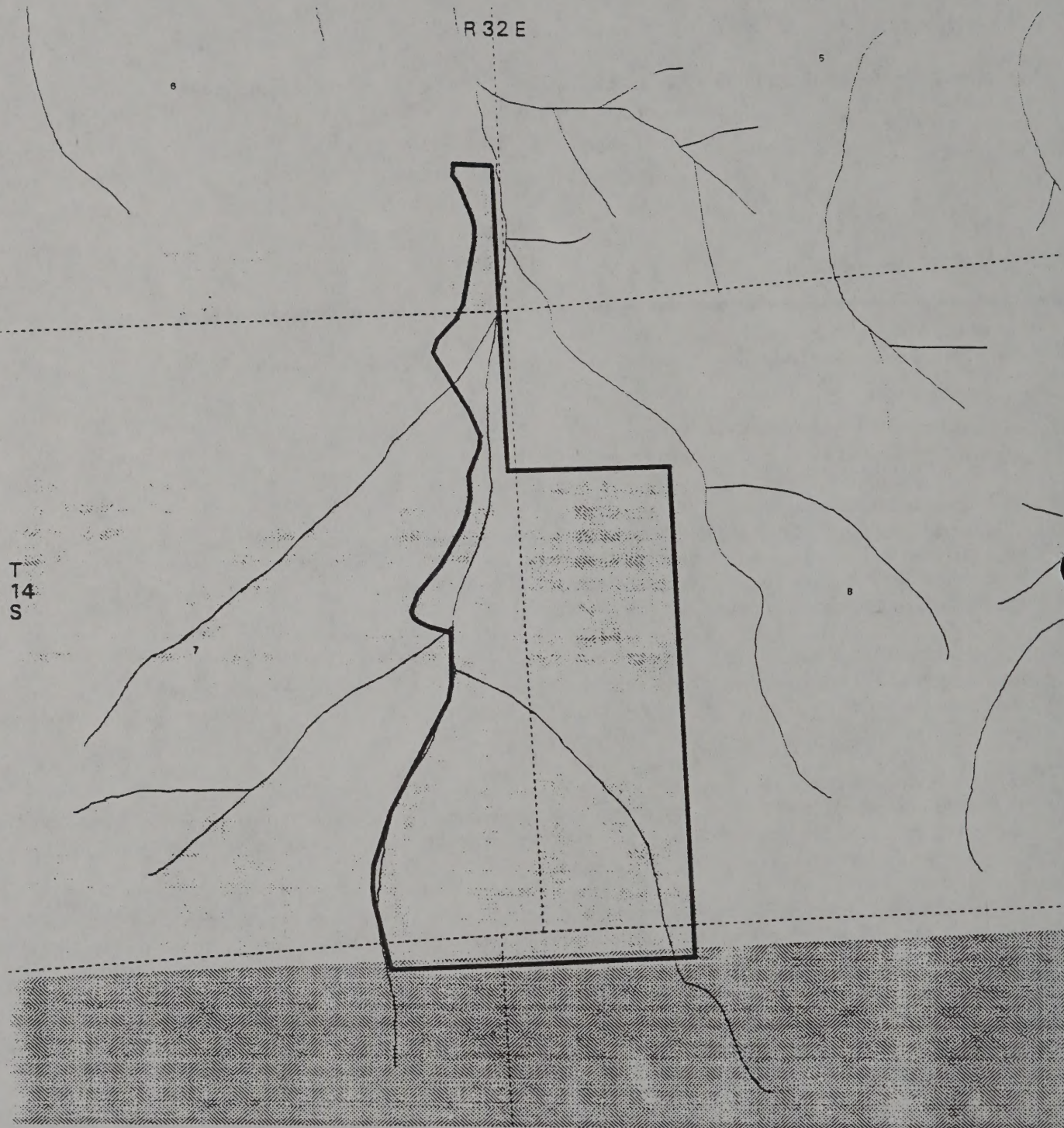
Hydrologic Information:

The stream channel of Little Pine Creek was generally narrow with many relatively deep areas. Accelerated erosion of adjacent roads and trails is delivering fine sediments to the stream. Off road vehicles are damaging uplands and increasing overland erosion.

Discussion:

Livestock access to Little Pine Creek is increased because east allotment boundary fence is along creek. The likelihood of direct effects are greater from livestock crossing numerous times. However, ODFW spawning/rearing map shows only lower 0.25 miles of steelhead habitat. Past use indicates minimal indirect effects by high bank stability and good riparian community.

Pointer Mountain Allotment #04056



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



71 ROUND TOP

ESA Determination: **Likely to Adversely Affect**

Acreage: 360 Public	Active Preference: 20 AUM's	Seral Stages: 0 Climax
10,830 Private	Season of Use: 4/ 1/00 - 11/30/00	0 Late Seral
<u>11,190 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.30 Perennial	0 Early Seral
Fish Habitat: 0.30 Miles	1.20 Intermittent	0 Unclassified
Steelhead Habitat: 0.30 Miles	0.00 Ephemeral	
	<u>1.50 Total</u>	

Grazing Management:

Grazing season on the Grub creek parcel was changed in 1998 to protect bull trout habitat downstream in the John Day river. The new use period is 4/1 - 5/31.

Monitoring Information:

None.

Fisheries Information:

Except for Grub Creek, all streams in the allotment are seasonal with no fisheries, and little or no riparian component. Grub Creek has some riparian vegetation, and it supports spawning/rearing habitat for summer steelhead.

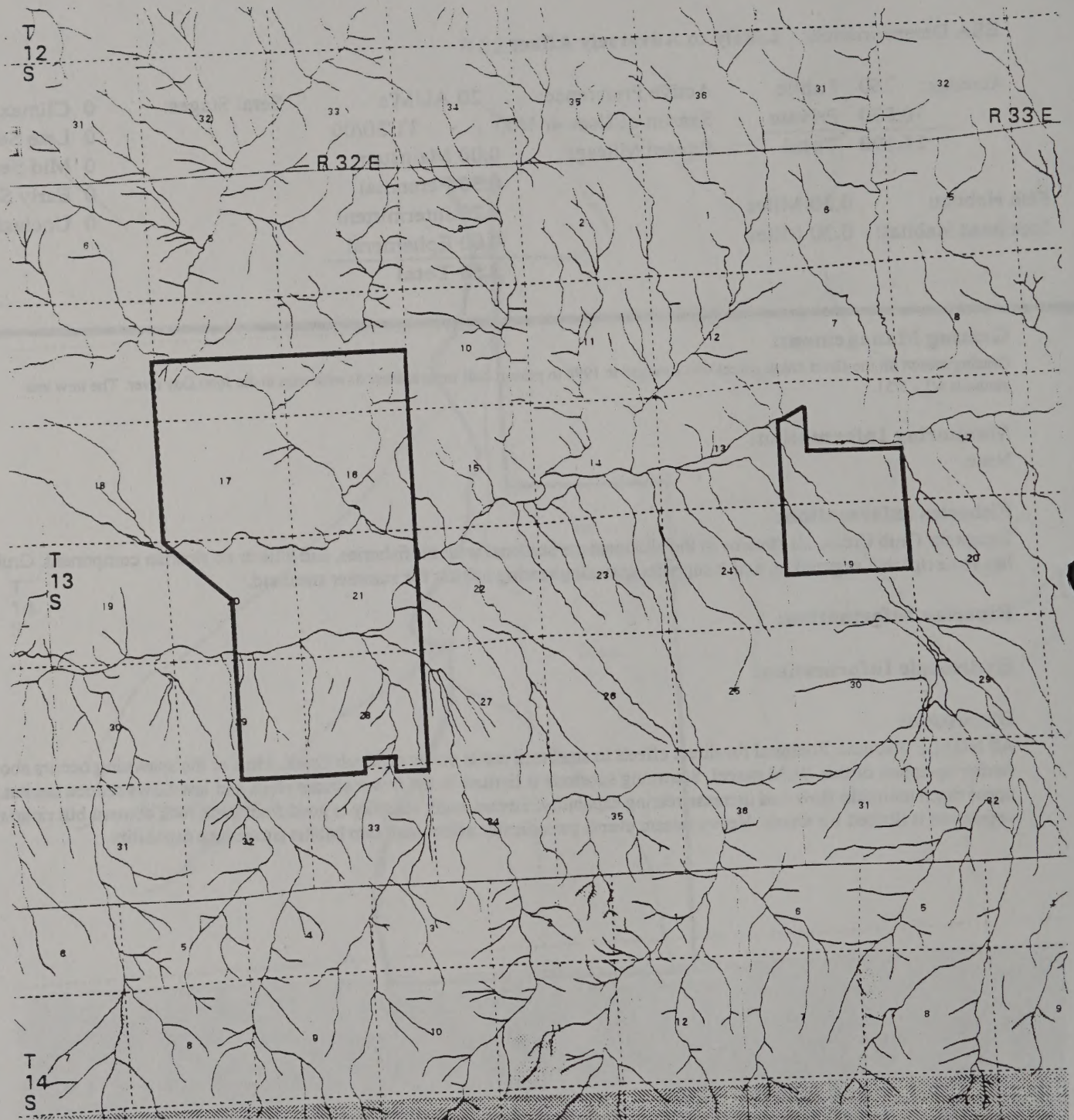
Riparian Information:

Hydrologic Information:

Discussion:

All NOALE disposal. Potential for direct effects to steelhead redds occur on Grub Creek. Most of the spawning occurs above WF further upstream of this BLM parcel. Spawning substrate is limited in the lower stream reach and low flows reduce habitat. Spring upper reach maintain flow and increase rearing capability. Stream bank stability is good from bank rock content but riparian vegetation is limited for shade. Heavy stream events periodically affect instream habitat and reduce capability.

Round Top Allotment #04071



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



6 COTTONWOOD CREEK

ESA Determination: **Likely to Adversely Affect**

Acreage: 3,113 Public	Active Preference: 204 AUM's	Seral Stages: 0 Climax
4,698 Private	Season of Use: 4/ 1/00 - 9/30/00	12 Late Seral
<u>7,811 Total</u>	Stream Mileage: 0.00 Mainstem	39 Mid Seral
	1.50 Perennial	49 Early Seral
Fish Habitat: 0.80 Miles	8.00 Intermittent	0 Unclassified
Steelhead Habitat: 0.80 Miles	<u>0.00 Ephemeral</u>	
	9.50 Total	

Grazing Management:

In 1990 the BLM changed the grazing treatment on the riparian pastures to spring use 4/1-6/15. However the permittee has not followed the new schedule (designed to improve riparian conditions) and enforcement has been difficult since the majority of the stream/riparian habitat is on private land. There are four pastures. Actual use has consistently been well above the AUM's allowed on the grazing permit: 272,377,446,424,569,379, and 274 AUM's in 1988,89,90,91,92,93,95, and 1997 respectively.

Monitoring Information:

Utilization, actual use, two trend studies and three riparian photopoints. A channel cross section was established in 1995.

Fisheries Information:

This section of Cottonwood creek has marginal spawning/rearing habitat quality for steelhead trout. in its present condition. Season long grazing for decades has reduced vegetation cover, increased streambank instability and likely increased width to depth ratios. High water temperatures in Cottonwood creek are a water quality problem originating within this allotment. Private lands in the allotment border National Forest lands.

Riparian Information:

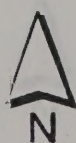
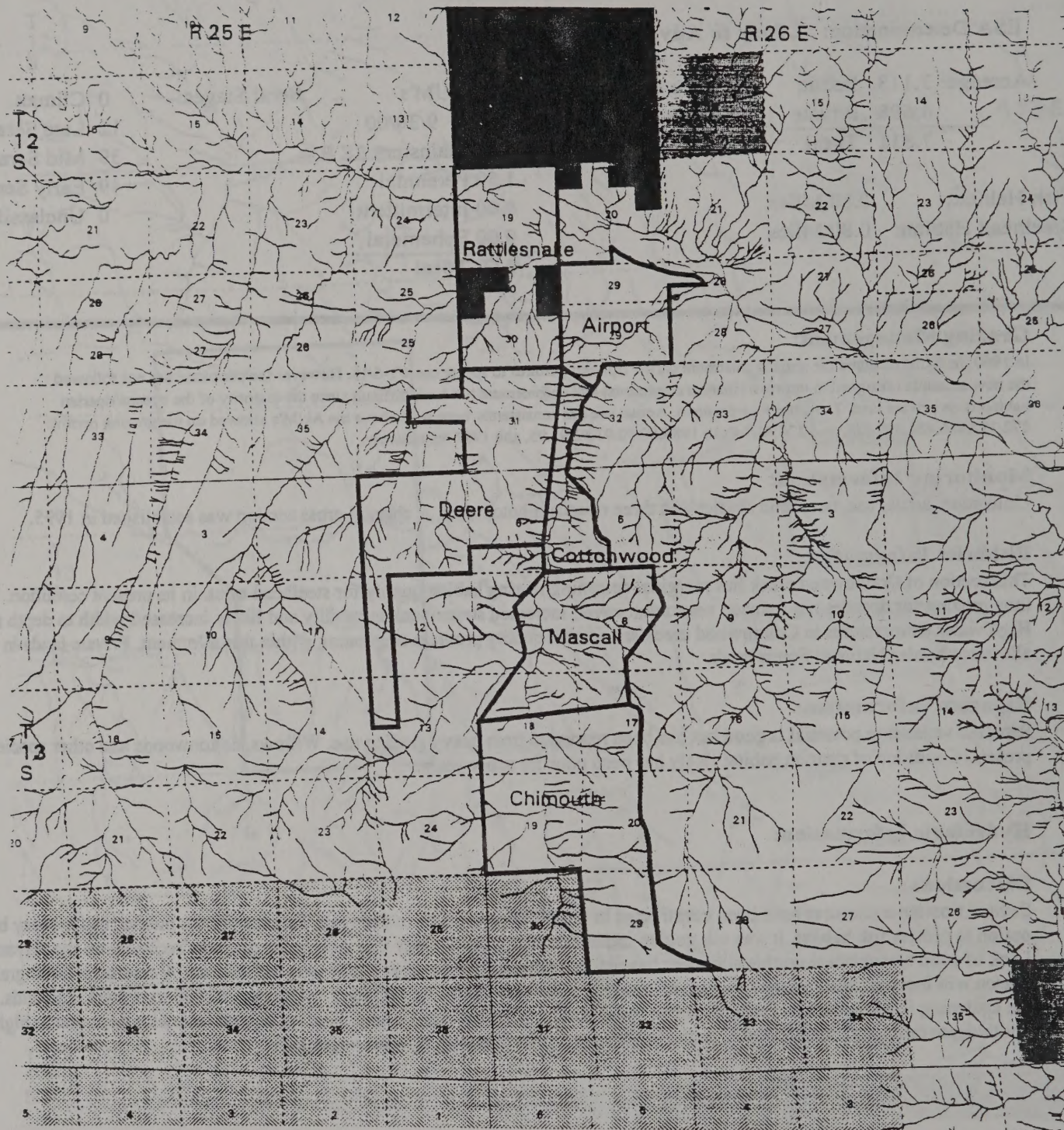
Riparian vegetation potential is good but has been repressed from heavy grazing use. Willows, cottonwoods and other species are present. Condition of riparian habitat likely has been poor for many years.

Hydrologic Information:

Discussion:

Several riparian exclosures have been constructed in the '70's that are now in disrepair. Fencing off the public riparian may be our 1st option to protect fish habitat. It was our goal to implement a grazing strategy that would also promote recovery on the private lands. Lack of good management on this allotment has reduced potential for steelhead spawning and rearing. A change in 2000 grazing season will include timely pasture moves. monitoring to identify spawning segments will occur in 2000 to protect any redds. Most of the spawning likely occurs on FS lands above the allotment where habitat is good. Rearing habitat is likewise poor due to high width/depth ratio, high temperatures, unstable banks and poor overstory riparian vegetation.

Cottonwood Creek Allotment #04076



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



BARBER POLE BUTTE

ESA Determination: **Likely to Adversely Affect**

Acreage: 560 Public	Active Preference: 28 AUM's	Seral Stages:	0 Climax
2,240 Private	Season of Use: 11/ 1/00 - 2/28/00		0 Late Seral
2,800 Total	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.10 Perennial		0 Early Seral
1 Habitat: 0.10 Miles	1.40 Intermittent		0 Unclassified
Head Habitat: 0.10 Miles	0.00 Ephemeral		
	1.50 Total		

Grazing Management:

Grazing occurs for 1 1/2 months between 11/1-2/28 and 4/15-5/31 in T10S,R27E NE 1/4 NE 1/4 of section 14, RMP says 11/1-6/30.

Monitoring Information:

1981 riparian habitat inventory rated the riparian habitat as poor. for this BLM section of Cottonwood Creek (300 yards).

Fisheries Information:

This section of Cottonwood Creek is poor to fair in condition, and is utilized by summer steelhead for spawning and rearing. The stream has a high width to depth ratio, with little cover for fish.

Riparian Information:

Riparian vegetation is limited and sparse. BLM has very limited management influence on Cottonwood Creek.

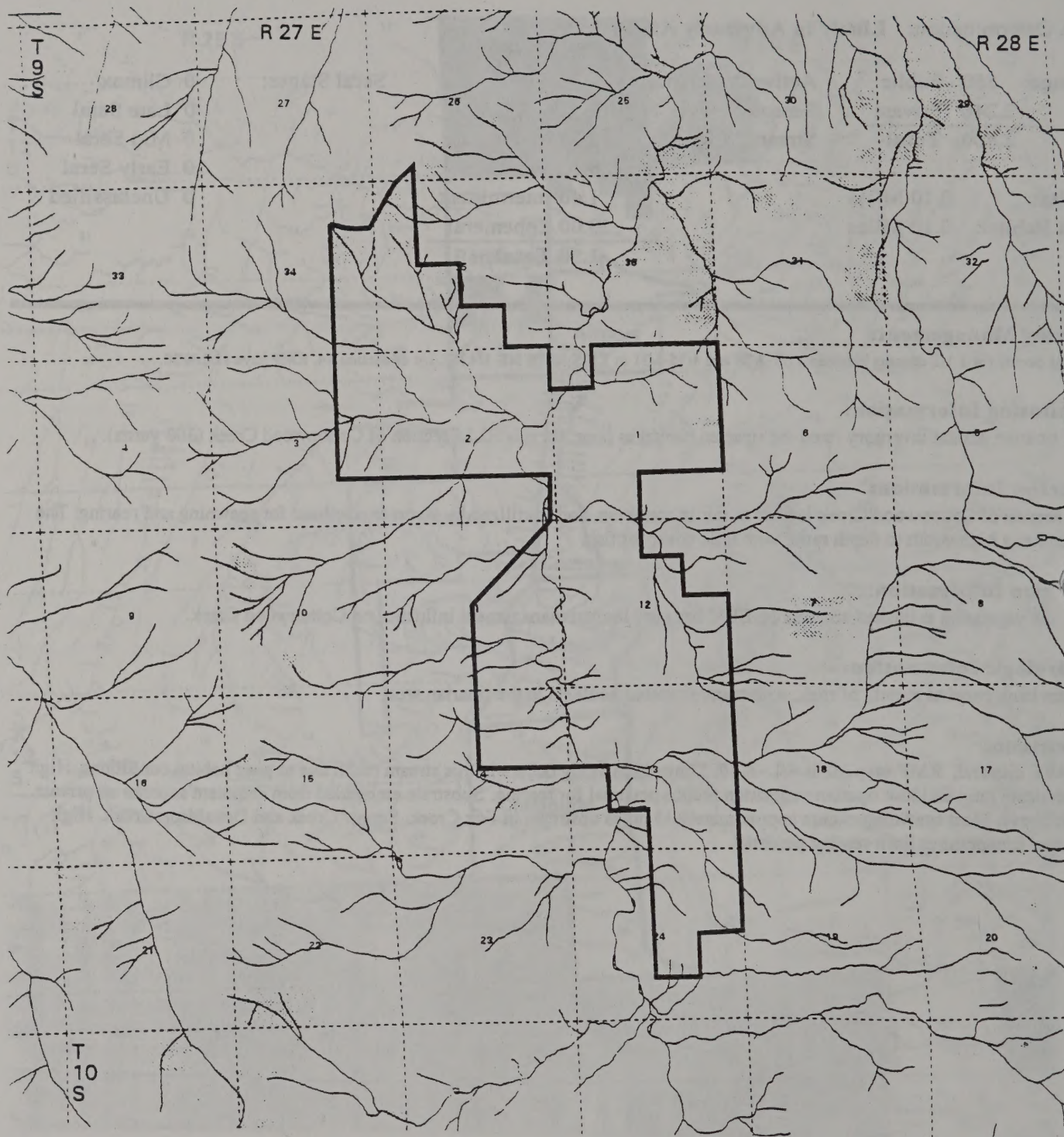
Hydrologic Information:

Stream bank consists mostly of rock, with many scattered boulders in the riparian area.

Discussion:

NOALE disposal. RMP says use is 4/1 - 6/30. Limited spawning occurs in this stream reach due to poor habitat conditions. High width/depth ratio and low riparian vegetation reduce potential for rearing. Substrate embedded from sediment sources on private lands above. Most spawning occurs approximately 15 miles upstream in Fox Creek. Squaw Creek and Donaldson Creek. High summer temperatures limit rearing potential.

Barber Pole Butte Allotment #04085



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



1993 WEST BOLOGNA CREEK

ESA Determination: **Likely to Adversely Affect**

Acreage:	80 Public	Active Preference:	12 AUM's	Seral Stages:	0 Climax
	5,000 Private	Season of Use:	5/ 1/00 - 6/30/00		0 Late Seral
	<u>5,080 Total</u>	Stream Mileage:	0.00 Mainstem		0 Mid Seral
			0.60 Perennial		0 Early Seral
Fish Habitat:	0.60 Miles		0.40 Intermittent		0 Unclassified
Steelhead Habitat:	0.60 Miles		<u>0.00 Ephemeral</u>		
			1.00 Total		

Grazing Management:

BLM is a very minor part in this allotment. Allotment has been grazed from 9/15-10/15 or 5/1-6/30 since 1991. Actual use for 1993 was 3 AUM's and 2 AUM's in 1996.

Grazing occurs from 5/1-6/30 on T9s, R26E Sec 6 NW1/4NW1/4 (Bologna Creek)

Monitoring Information:

1981 riparian habitat inventory.

Fisheries Information:

Habitat in West Bologna Creek is in degraded condition, channel has little cover or complexity. It is marginal for steelhead spawning and rearing habitat.

Riparian Information:

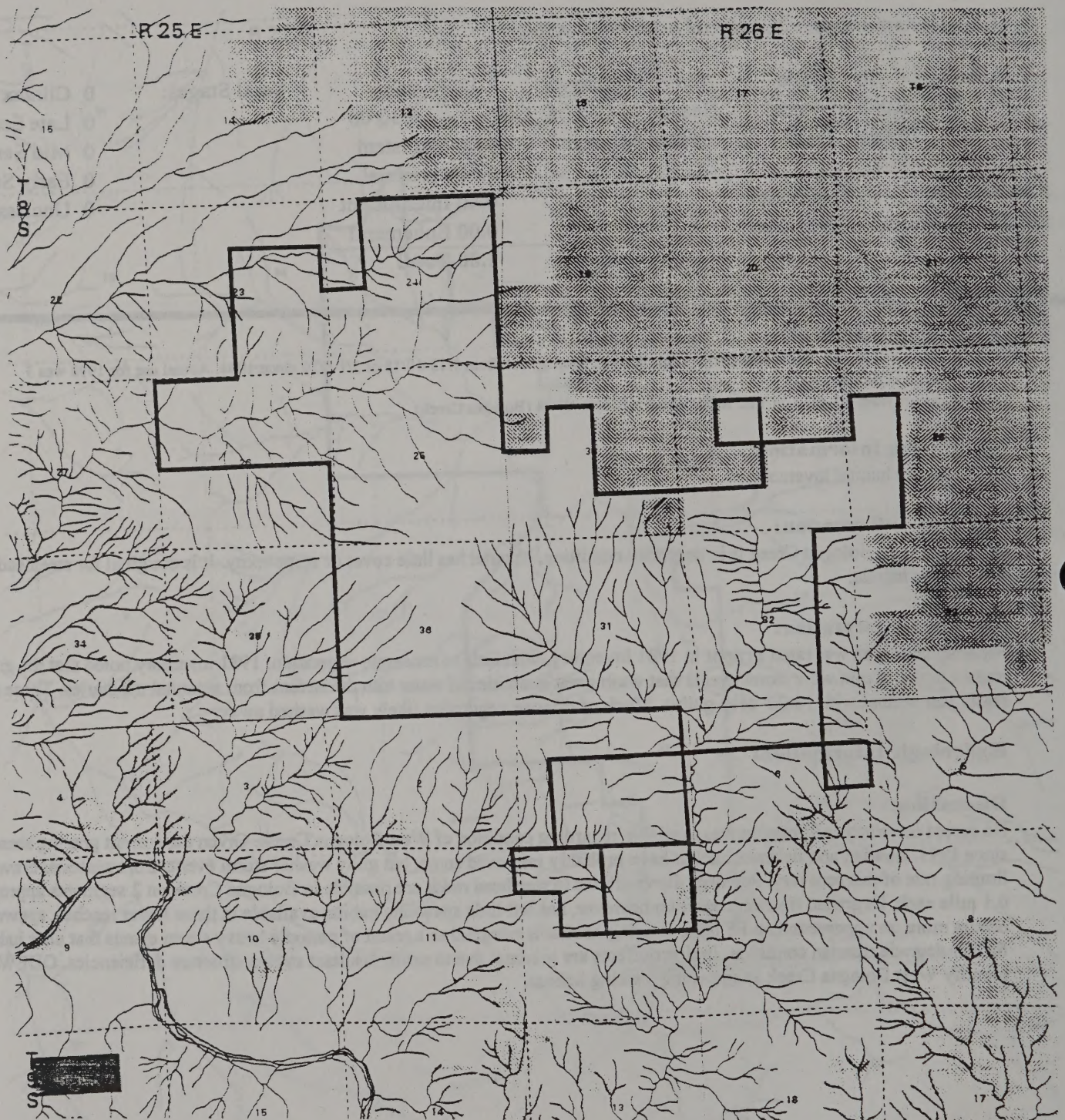
Riparian condition was rated as poor in 1981 inventory, with little to moderate vegetation. 1981 inventory noted that the greatest impact to the stream were storm events that wash great quantities of water into the stream from seasonal tributaries. These draws are really just washes with 10-20' deep gullies. Much of riparian vegetation likely was washed away.

Hydrologic Information:

Discussion:

No recent inventory information was available regarding condition of West Bologna Creek. Given the current grazing season in place since 1991, riparian and fisheries habitat have probably improved some, but gully washer storm events from seasonal draws are likely limiting rate of this recovery. Potential direct effects to steelhead redds are possible in Bologna Creek on 2 segments approximately 0.1 mile each. Degraded riparian condition however, has left little spawning habitat available in these lower reaches. Spawning likely occurs more on upper reach on FS land. Rearing habitat is marginal as a result of periodic heavy storm events that alter habitat and further degrade riparian condition. Indirect effects are minimal due to storm resultant stream structure deficiencies. ODFW does not identify West Bologna Creek as spawning/rearing habitat.

West Bologna Creek Allotment #04093



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



3 ROCKPILE

ESA Determination: **Likely to Adversely Affect**

Acreage: 4,918 Public	Active Preference: 928 AUM's	Seral Stages:	0 Climax
4,899 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
<u>9,817 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	10.80 Perennial		0 Early Seral
Fish Habitat: 7.60 Miles	7.50 Intermittent		0 Unclassified
Steelhead Habitat: 7.60 Miles	0.00 Ephemeral		
	<u>18.30 Total</u>		

Grazing Management:

Grazing is a rest rotation strategy with nine pastures. Use occurs between 4/8-9/15. Prior to 1994, grazing management was poor on this allotment, with riparian areas being overused, with little use on uplands. The allotment was rested in 1994 and 1995, and then a rotation system was implemented in 1996, with a small herd. Upland conditions are good with bunchgrass dominating drier sites and Idaho fescue in higher, moister sites (forested). Actual use in AUM's: 1998(315), 1996(356), 1993(309+unauthorized use) and 1990(164). Unauthorized use in pastures along the SFJDR has been a problem in 1997 and 1998, as the permittee is still improving fences and gaining ranching experience.

Monitoring Information:

Utilization data, riparian photopoints (8), seven trend studies, two water temperature data loggers (SFJDR). Riparian photopoint studies (1979 and 1990).

Fisheries Information:

The SFJDR provides fair/good habitat for steelhead. Fair cover from deep pools, vegetation, instream wood and substrate exists in most areas. High sediment loads and cobble embeddedness do limit production capacities because quality of rearing habitat is impaired, as is spawning habitat. Elevated water temperatures have also degraded fish habitat potential. These factors are most like the result of activities upstream of the allotment and past management in the allotment. Frazier creek has about 0.2 miles of steelhead habitat, a 6' boulder falls appears to be an upstream barrier, as no fish were observed above. Cougar Gulch may provide periodic spawning habitat but no fish have been observed rearing in stream during recent assessment.

Riparian Information:

The riparian zone of the SFJDR is proper functioning condition, Frazier, Cougar Gulch and Martin Creeks are unrated. Ecological condition is good at study sites along the SFJDR, with a stable possibly upward trend. This is not typical for all of the SFJDR corridor, since the riparian areas have been overused so much in past years (prior to 1994). However most areas along the SFJDR are likely improving in condition. Comparisons of riparian photopoints taken in 1979 and 1990 indicate that conditions have improved overall. Riparian conditions along Martin and Frazier Creeks are fair to good. Fall grazing and unauthorized use has likely kept trends static.

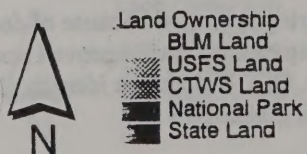
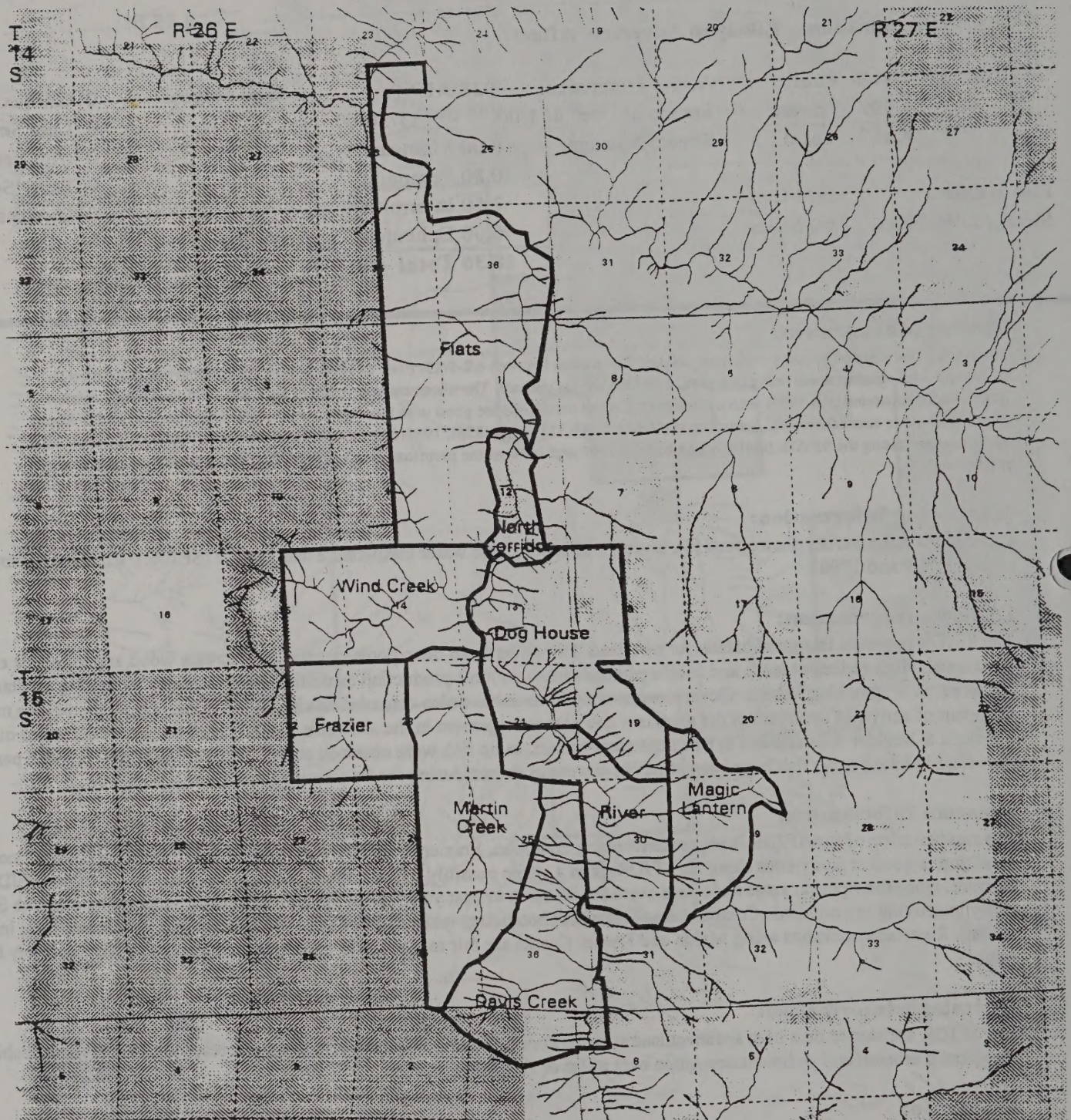
Hydrologic Information:

The SFJDR appears to be a high sediment load system. Poor management activities in upstream reaches of the river probably have accelerated erosion and sediment deposition over miles of river downstream.

Discussion:

Spawning potential in SF John DAY in this allotment is limited due to embedded substrate. Rearing is limited because of decreased pool volume and elevated temperatures. Fencing excludes livestock on most of SFJD and grazing rotation has improved riparian vegetation. Potential direct effects are possible on 0.2 miles of Frazier Creek below barrier falls. ODFW does not identify Cougar Gulch as spawning/rearing habitat. Indirect effects are kept to a minimum with the current grazing plan.

Rock Pile Allotment #04103



8 LITTLE WALL CREEK

ESA Determination: **Likely to Adversely Affect**

Acreage: 320 Public	Active Preference: 53 AUM's	Seral Stages:	0 Climax
1,000 Private	Season of Use: 4/ 1/00 - 5/31/00		0 Late Seral
<u>1,320 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.70 Perennial		0 Early Seral
Fish Habitat: 0.70 Miles	0.30 Intermittent		0 Unclassified
Steelhead Habitat: 0.70 Miles	<u>0.00 Ephemeral</u>		
	1.00 Total		

Grazing Management:

Grazing season changed in 1998 to spring use only. Good upland ground cover, elk sedge, bunchgrass, Idaho fescue, and good diversity of forbes.

Monitoring Information:

None.

Fisheries Information:

Little Wall, Bacon and Three Trough Creeks have fair to good trout habitat, but past grazing and adjacent road construction activities have likely increased width to depth ratios, and diminished riparian vegetation components. Streambanks show evidence of instability (cutbanks, bank sloughing).

Riparian Information:

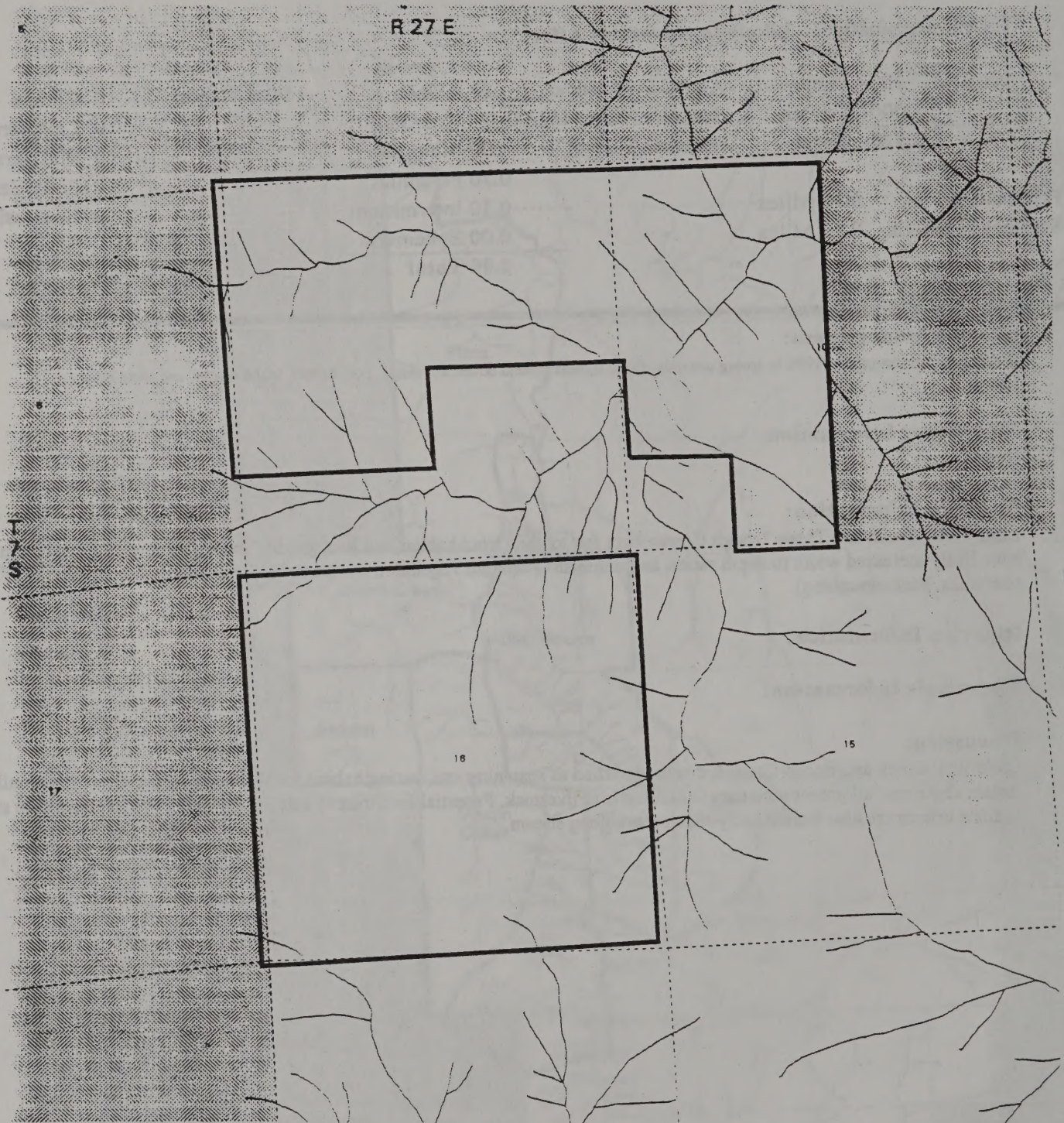
Hydrologic Information:

Discussion:

Little Wall Creek and Bacon Creek are both identified as spawning and rearing habitat for steelhead. Approximately 0.4 miles of stream along east allotment boundary is accessible to livestock. Potential for direct effects is increased by road adjacent to stream. Indirect effects are also increased by road access along stream.

Little Wall Creek Allotment #04108

R 27 E



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



5 CANYON MTN.

ESA Determination: **Likely to Adversely Affect**

Acreage:	50 Public	Active Preference:	5 AUM's	Seral Stages:	0 Climax
	15 Private	Season of Use:	5/ 1/00 - 6/15/00		0 Late Seral
	65 Total	Stream Mileage:	0.00 Mainstem		0 Mid Seral
			0.40 Perennial		0 Early Seral
Fish Habitat:	0.40 Miles		0.20 Intermittent		0 Unclassified
Steelhead Habitat:	0.40 Miles		0.00 Ephemeral		
			0.60 Total		

Grazing Management:

Grazing season adjusted to 5/1-6/15 in 1998.

Monitoring Information:

None.

Fisheries Information:

This section of Little Pine Creek (0.4 miles) is fair to good condition. The stream has been impacted historically by mining activities. Little Pine creek provides spawning and rearing habitat for redband trout and westslope cutthroat trout.

Riparian Information:

Riparian condition is improving but is still recovering from past mining disturbances.

Hydrologic Information:

Discussion:

ODFW indicates steelhead spawning is downstream of this allotment approximately 0.3 miles. The potential for direct effects is low. Potential riparian condition is limited by past mining activity. Bank stability is provided by rock content. Riparian vegetation is recovering but could improve. Indirect effects are related to hardwood browsing but are minimal.

Canyon Mountain Allotment #04115

T
13
S

R 32 E

T
14
S

6



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



ESA Determination: Likely to Adversely Affect

Acreage: 9,493 Public	Active Preference: 1,170 AUM's	Seral Stages:	0 Climax
33,018 Private	Season of Use: 5/ 1/00 - 10/31/00		0 Late Seral
<u>42,511 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	4.80 Perennial		0 Early Seral
Fish Habitat: 4.40 Miles	15.40 Intermittent		0 Unclassified
Steelhead Habitat: 2.70 Miles	0.00 Ephemeral		
	<u>20.20 Total</u>		

Grazing Management:

90% of allotment is forested upland habitat. Generally ground cover is good with ample forage from elk sedge, bunchgrasses, Idaho fescue, mountain brome and cheatgrass. Public lands are scattered widely. 1 1/2 months of use within each listed BLM parcel between 6/1-9/1. Parcels 1) T11S, R28E, SW 1/4 SW 1/4 of section 17, W1/2 NW 1/4 of section 20 (Squaw Creek), 2) T11S, R28E, SW 1/4 SW1/4 of section 30, W 1/2 NW 1/4 of section 31 (Squaw Creek), 3) T12S, R28E, W1/2 NE1/4 of section 6 (Squaw Creek), 4) T10S, R27E, S1/2 NE 1/4, N1/2 SE1/4 of section 6 (Gilmore Creek), 5) T11S, R27E, SW 1/4 SW 1/4 of section 6, SW1/4NE 1/4 of section 7 (Rudio Creek), 6) T11, R27 section 29 S1/2SW1/4 and Section 32 NW 1/4, NE1/4NW1/4,SE1/4SW1/4 (Franks Creek)

Monitoring Information:

Utilization study, three trend studies 1981 Riparian Habitat Inventory. Actual use in AUM's 1989(934), 1990 (992), 1993 (1020), 1994 (934), 1995 (795), 1996 (438), 1997 (680).

Fisheries Information:

Squaw, Rudio, and Gilmore all provide spawning and rearing habitat for steelhead trout. Fish habitat in Squaw Creek is fair to good impacted by siltation from logging road building in the drainages and livestock use. Habitat in Rudio creek is fair with boulders being the dominant cover type. Gilmore creek has fair fish habitat except for channelized area which is poor. Franks Creek has poor fish habitat, and steelhead access to this portion is blocked downstream.

Riparian Information:

About 1.7 miles of Squaw creek within allotment, in three segments, between private lands. 1981 riparian habitat inventory rated these segments as fair to poor in condition, citing siltation from logging activities, cattle trampling and general lack of riparian species. From 1996 and 1997 field assessments it appears as though stream conditions are improving. Stream still has a modest riparian component of alder, dogwood, and willow. Fir spruce, and pine are dominant woody species. Riparian condition of Rudio creek (0.4) miles on one 40 acres parcel was rated as fair in 1981. Only a modest riparian vegetation component of willows, ribes and forbes were present, presumably because of the difficulty in establishing along the bouldered streambanks. Gilmore creek (0.6 mile on one 240 acres parcel) has fair riparian condition except where stream was channelized next to adjacent road, vegetation is minimal in new constructed channel. Franks creek (1.7 miles) was rated as poor in riparian habitat condition, in a 1981 inventory. Field assessment in 1993 showed some improvement.

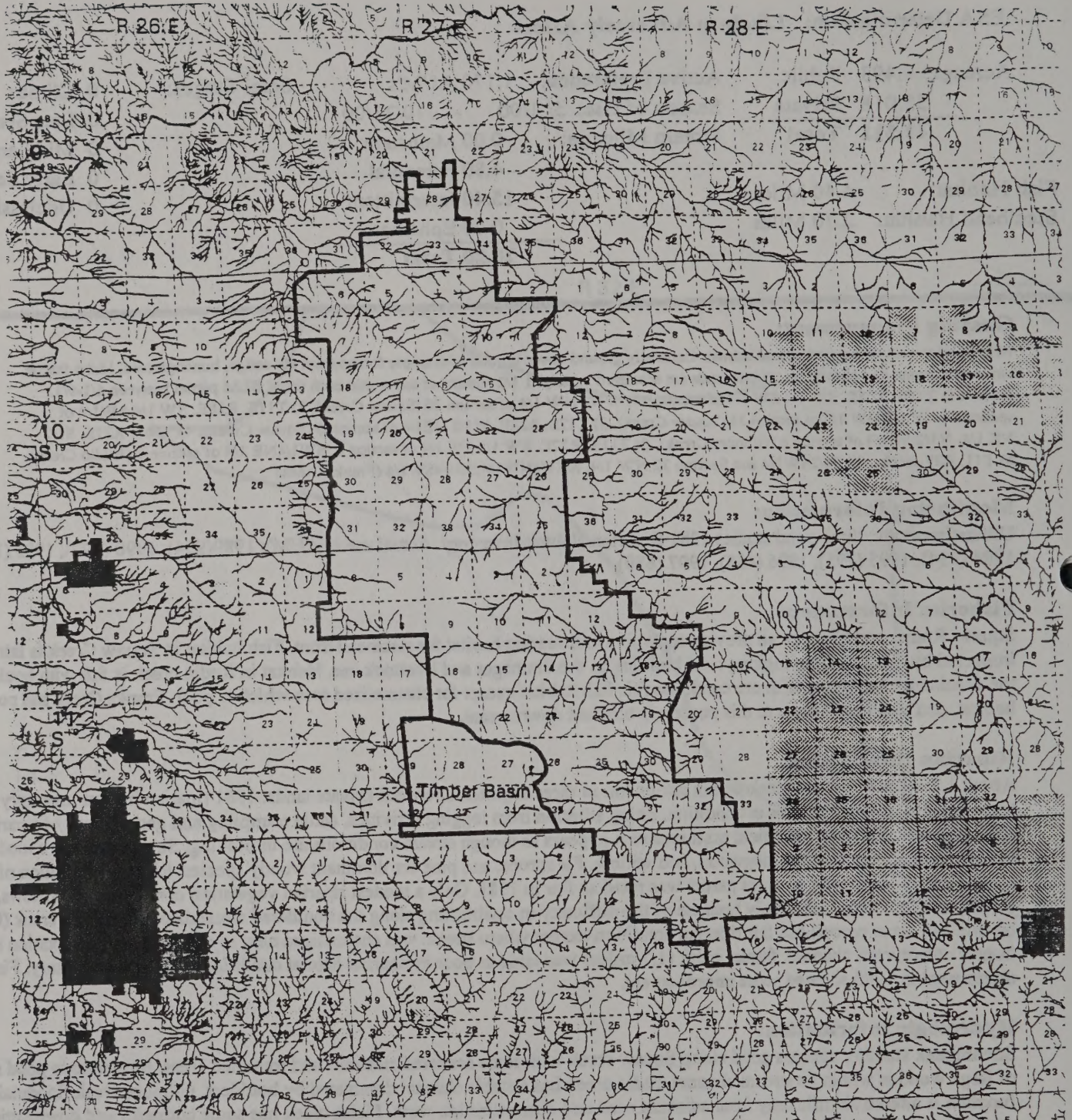
Hydrologic Information:

Streambank stability appears good along Squaw creek with some scattered cutbanks and trampled areas. Moderate to good amount of large wood is within its stream channel. Rudio creek has a stable channel dominated by boulders. Gilmore creek floodplain function is altered significantly from adjacent road and channelization work. Franks creek has some cutbanks and downcutting processes that are still active.

Discussion:

About 5000 acres proposed for disposal in the NOALE EIS. Access to all streams is increased by riparian roads. Potential for direct effects is reduced by late season use 6/1-9/1 but redd trampling may occur. Indirect effects are associated with hardwood browsing limited shrubs. Roads have reduced riparian vegetation potential on most stream segments.

Kinzua Allotment #04151



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



53 CREEK

ESA Determination: **Likely to Adversely Affect**

Acreage: 706 Public	Active Preference: 51 AUM's	Seral Stages: 0 Climax
400 Private	Season of Use: 4/10/00 - 11/30/00	2 Late Seral
1,106 Total	Stream Mileage: 0.00 Mainstem	91 Mid Seral
	0.70 Perennial	7 Early Seral
Fish Habitat: 0.70 Miles	3.00 Intermittent	0 Unclassified
Steelhead Habitat: 0.70 Miles	0.00 Ephemeral	
	3.70 Total	

Grazing Management:

Since 1990, the allotment has been grazed early spring 4/15 to 5/15 or late fall 10/15-10/30. Actual grazing use 1984(34), 1987 (56), 1988 (43), 1993 (33), 1996 (40).

Monitoring Information:

Water temperature data, peak crest gauge, utilization, and one trend study.

Fisheries Information:

This segment of Cottonwood creek appears to be in good condition. summer steelhead use Cottonwood creek as spawning and rearing habitat.

Riparian Information:

The riparian zone of Cottonwood creek is functioning at risk. a diversity of understory shrubs, willows, birch and alders provide good streambank stability. black cottonwoods are common, providing shade to the stream. High water temperatures occurring in the stream are likely caused by upstream sources.

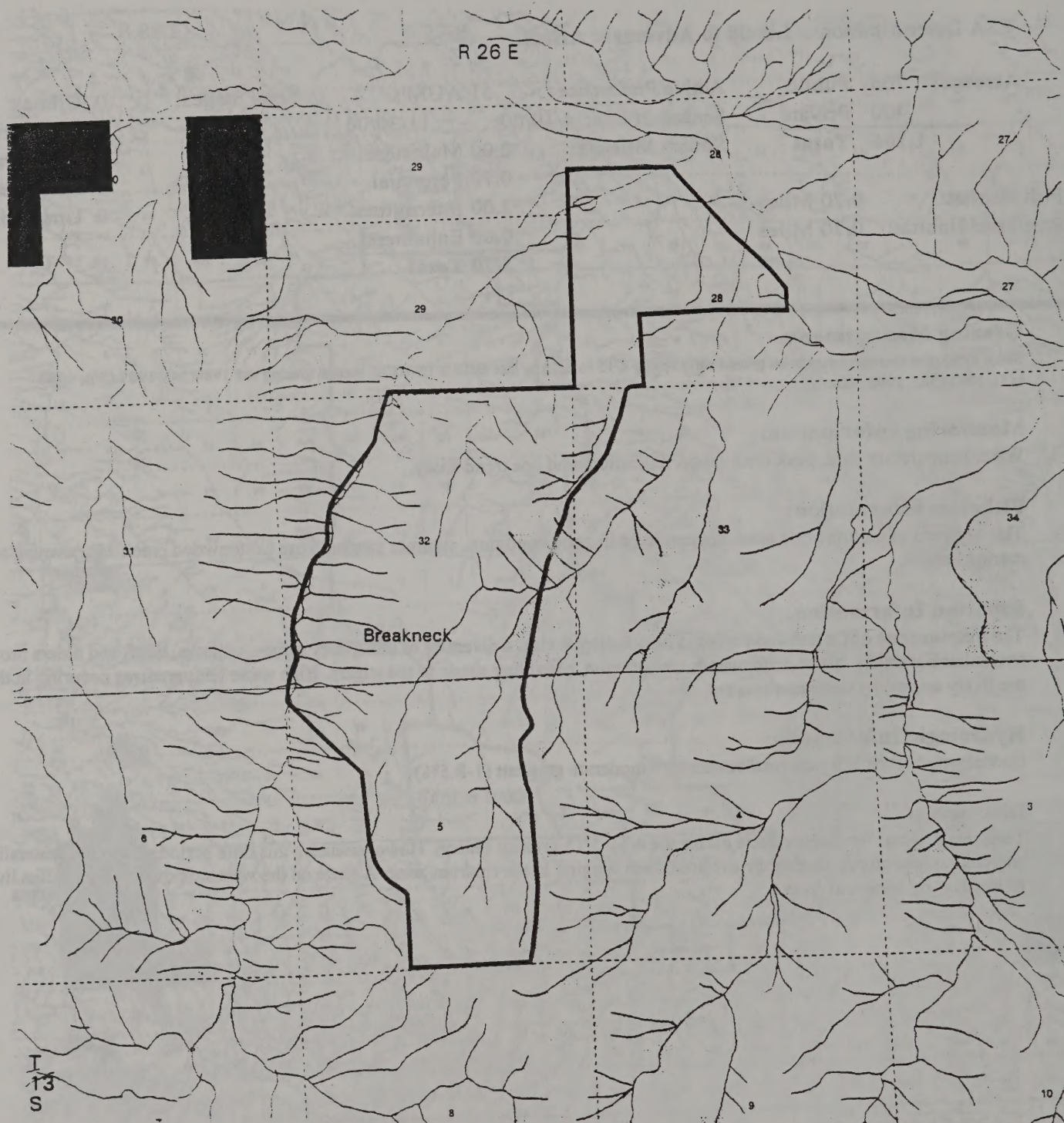
Hydrologic Information:

Cottonwood creek is a perennial stream with moderate gradient (1-2.5%)

Discussion:

There is potential for direct effects during the 4/15-5/15 grazing season. However during this time period, flows are generally high and cool temperatures discourage livestock from loafing in the riparian zone. A fence on the west side of the creek limits livestock from crossing back and forth.

Creek Allotment #04163



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



58 BAKER CITY

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 640 Public	Active Preference: 80 AUM's	Seral Stages:	0 Climax
1,200 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
1,840 Total	Stream Mileage: 0.00 Mainstem		25 Mid Seral
	0.80 Perennial		75 Early Seral
Fish Habitat: 0.80 Miles	1.60 Intermittent		0 Unclassified
Steelhead Habitat: 0.80 Miles	0.00 Ephemeral		
	2.40 Total		

Grazing Management:

Actual grazing has been 4/1 to 5/31 since 1994.

Monitoring Information:

Actual use information for 1992-1994. Utilization study, trend study.

Fisheries Information:

According to ODFW, Franks creek is an anadromous system utilized by steelhead for spawning and juvenile rearing. This section of Franks creek is in degraded condition. A diminished riparian vegetation component, low warm season flows, and encroaching road bed (and sediment runoff) all contribute to poor fisheries habitat. This portion of Franks Creek is above a known fish barrier.

Riparian Information:

The riparian area of Franks Creek is functioning at risk. Riparian condition improvement is limited by adjacent road which encroaches the floodplain and riparian zone.

Hydrologic Information:

Discussion:

All lands proposed for disposal in the NOALE EIS. Baker City gulch is an intermittent drainage to Franks Creek. This portion of Franks Creek does not have suitable spawning gravels so potential for direct effects is low. Indirect effects are mainly the result of road constraining floodplain and reduced potential for riparian vegetation.

01 HERBERT ASHER

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 2,000 Public	Active Preference: 101 AUM's	Seral Stages: 0 Climax
2,200 Private	Season of Use: 4/ 1/00 - 12/31/00	608 Late Seral
<u>4,200 Total</u>	Stream Mileage: 0.00 Mainstem	223 Mid Seral
	0.60 Perennial	1,093 Early Seral
Fish Habitat: 0.00 Miles	4.60 Intermittent	75 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>5.20 Total</u>	

Grazing Management:

Livestock are grazed from 4/1-6/15 and 10/1-12/31. Actual use averaged 77 AUM's from 1988-1997.

Monitoring Information:

Three trend studies and utilization.

Fisheries Information:

None, no potential.

Riparian Information:

Bull Canyon is a perennial stream in marginal riparian condition. Tributary to mainstem John Day migratory habitat.

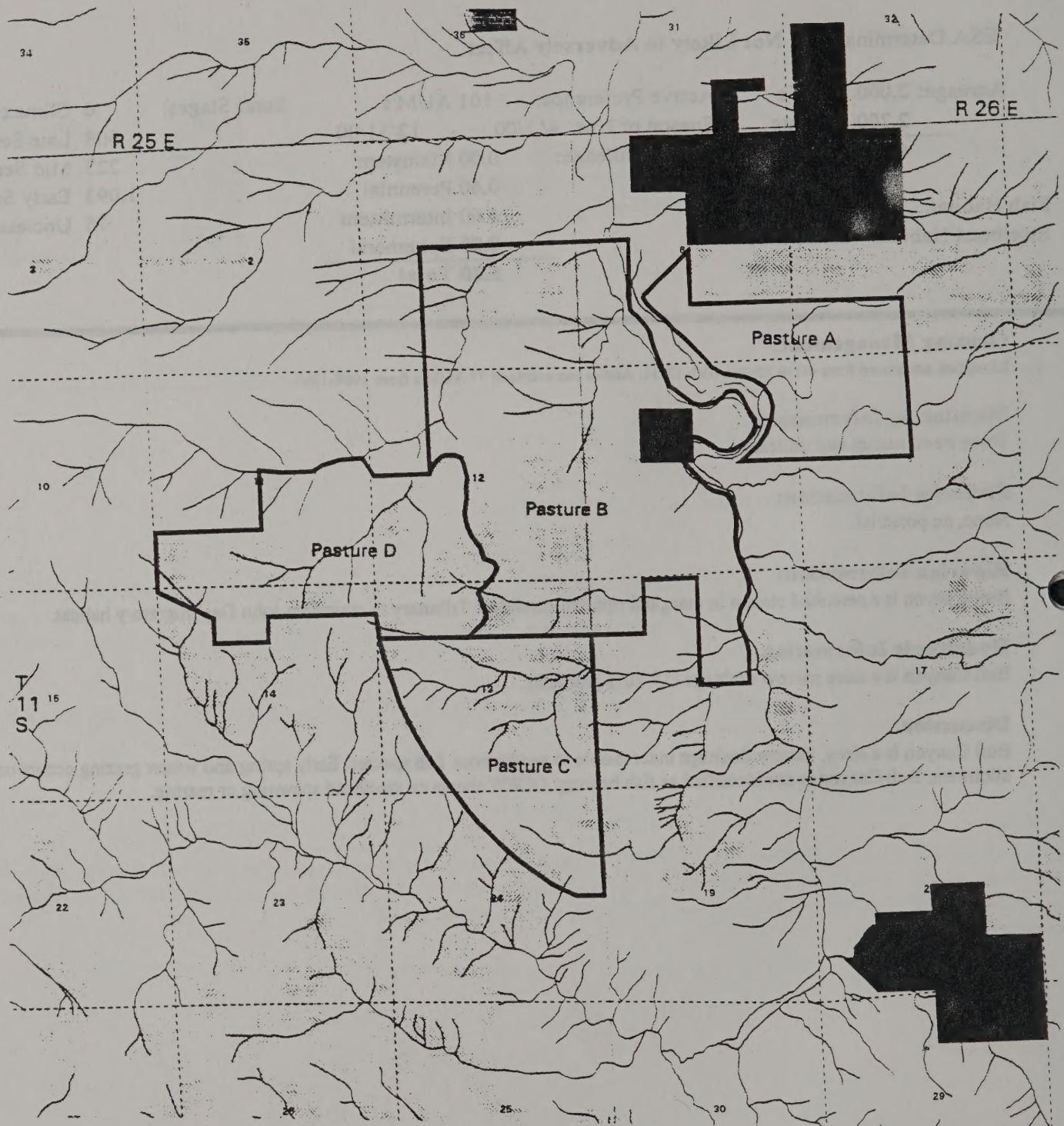
Hydrologic Information:

Bull Canyon is a steep narrow drainage (15-20% gradient).

Discussion:

Bull Canyon is a steep, narrow drainage inaccessible to anadromous fish species. Early spring and winter grazing occurs on this allotment. Bull Canyon is not identified as fish bearing. ODFW shows no steelhead spawning or rearing.

Herbert Asher Allotment #02501



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



78 BEAR CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 842 Public	Active Preference: 45 AUM's	Seral Stages: 68 Climax
4,358 Private	Season of Use: 4/15/00 - 11/29/00	285 Late Seral
<u>5,200 Total</u>	Stream Mileage: 0.00 Mainstem	255 Mid Seral
	0.00 Perennial	234 Early Seral
Fish Habitat: 0.00 Miles	0.75 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	<u>0.00 Ephemeral</u>	
	0.75 Total	

Grazing Management:

This allotment is managed as a category 'M' (Maintain) allotment due to the percentage of public land within the allotment boundaries.
This allotment is grazed from April 15 to November 29.

Monitoring Information:

There is one trend study plot within the allotment. A July, 1996 visit to the site found the uplands to be in excellent condition with erosion problems present.

Fisheries Information:

Public lands within the allotment contain no perennial streams, nor does it appear that public land management is negatively affecting downstream fisheries resources.

Riparian Information:

Public land in Flannary Gulch, an intermittent drainage does contain some facultative wetland species.

Hydrologic Information:

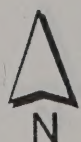
Discussion:

This allotment contains a small percentage of public land. There are no perennial streams located on public land within the allotment and grazing management does not appear to be causing any downstream effects.

Bear Creek Allotment #02508



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



12 BIG MUDDY

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 14,890 Public	Active Preference: 605 AUM's	Seral Stages: 197 Climax
64,483 Private	Season of Use: 3/ 1/00 - 12/18/00	1,861 Late Seral
<u>79,373 Total</u>	Stream Mileage: 5.34 Mainstem	4,211 Mid Seral
	5.59 Perennial	8,070 Early Seral
Fish Habitat: 5.34 Miles	5.50 Intermittent	551 Unclassified
Steelhead Habitat: 5.34 Miles	0.00 Ephemeral	
	<u>11.09 Total</u>	

Fish habitat is associated with perennial rivers and streams within the allotment. Approximately 5.34 miles of John Day River migratory habitat is associated with the allotment.

Grazing Management:

The authorized season of use in this allotment is March 1 to December 18. There are no fences on the allotment and there is no formal grazing system except to winter the animals on deeded land in the western part of the allotment and to summer the animals on the Upper Big Muddy, in the southwestern part of the allotment.

Monitoring Information:

There are three upland trend photo plots and Step Point Transects have been established in the allotment. One riparian trend photo plot has also been established.

Fisheries Information:

Fish habitat is associated with perennial rivers and streams within the allotment. Approximately 5.34 miles of John Day River migratory habitat is associated with the allotment as well as 0.25 miles of perennial stream, which is however located above a barrier (i.e. man-made dam). Therefore steelhead do not use any of the streams located within the allotment but do use the John Day River a migration corridor.

Riparian Information:

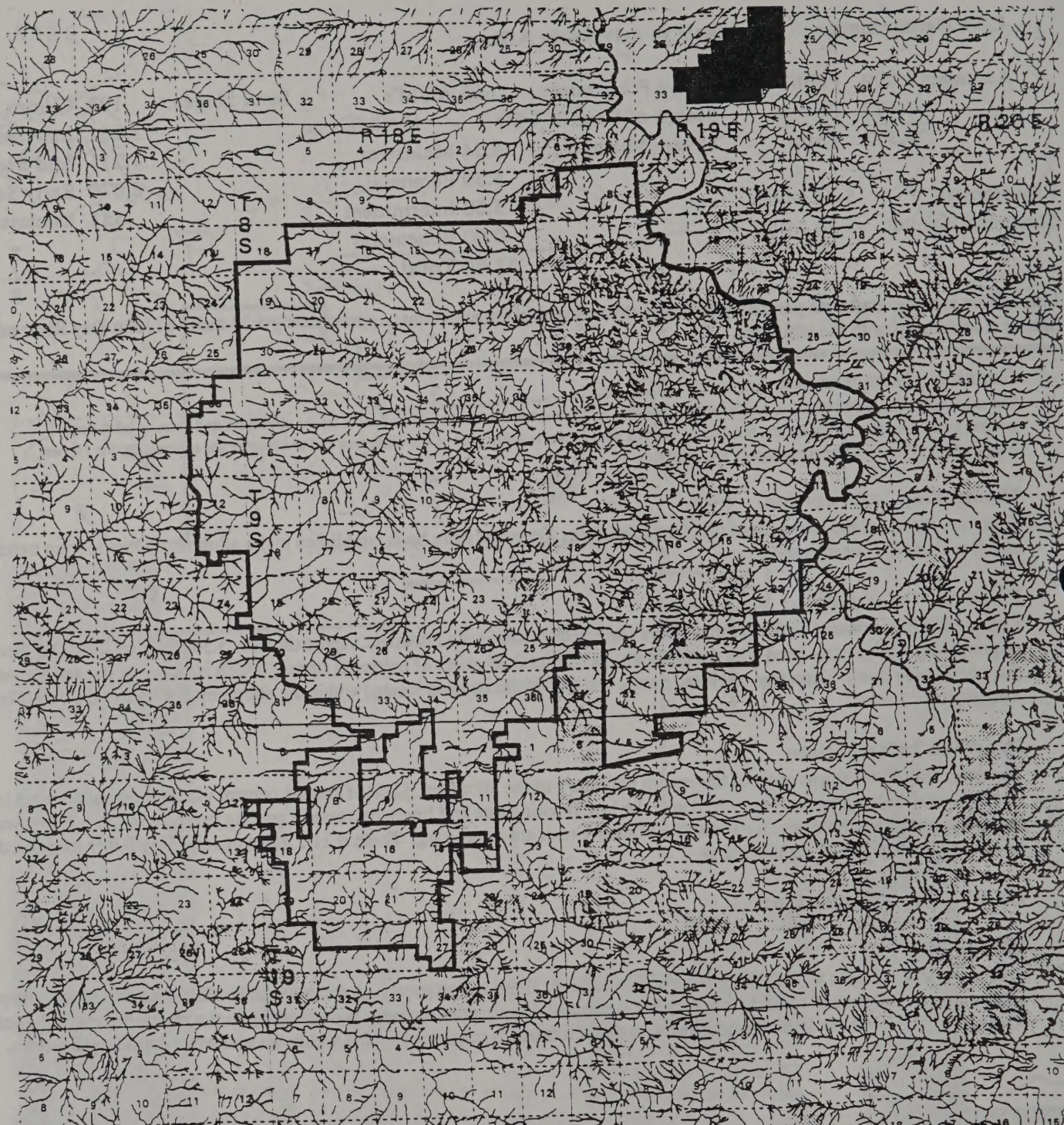
The John Day River forms most of the eastern boundary of the allotment. Lack of grazing control via fencing has resulted in the riparian areas being grazed. However, due to the low stocking rate and hence decrease in grazing pressure in the last few years, the riparian areas along the John Day River and Muddy Creek are improving. There is 11.5 miles of John Day River associated with the allotment, 5.34 of which is public land.

Hydrologic Information:

Discussion:

This allotment contains a small percentage of public land. There are no perennial streams with steelhead habitat located on public land within the allotment. Grazing intensity has decreased and riparian recovery is progressing in the riparian zone of the John Day River. Primary steelhead habitat associated with this allotment is migratory habitat within the mainstem John Day River.

Big Muddy Allotment #02512



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



514 BLACK ROCK ASSOCIATION

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 3.325	Public	Active Preference:	224 AUM's	Seral Stages:	0 Climax
12,160	Private	Season of Use: 4/ 1/00	- 10/31/00		658 Late Seral
<u>15,485</u>	Total	Stream Mileage:	0.00 Mainstem		1,799 Mid Seral
			0.25 Perennial		745 Early Seral
Fish Habitat:	0.25 Miles		2.00 Intermittent		123 Unclassified
Steelhead Habitat:	0.00 Miles		<u>0.00 Ephemeral</u>		
			2.25 Total		

Approximately 0.5 miles of Long Hollow Canyon and Brush Canyon are perennial stream miles located within public land. However th stretches are noted to be beyond anadromous habitat. Redband trout have been observed within the lower reaches of Long Hollow and Brush Canyon within the allotment.

Grazing Management:

Grazing within this allotment takes place between April and December. There are 9 separate pastures, and is being managed according to a rotation system designed in cooperation with the NRCS and local watershed council.

Monitoring Information:

Two trend photo plots and Step Point Transects have been established within this allotment.

Fisheries Information:

There are no anadromous fish known to occur within this allotment. Redband trout are present in the lower reaches of Brush Canyon and Long Hollow Canyon within the allotment.

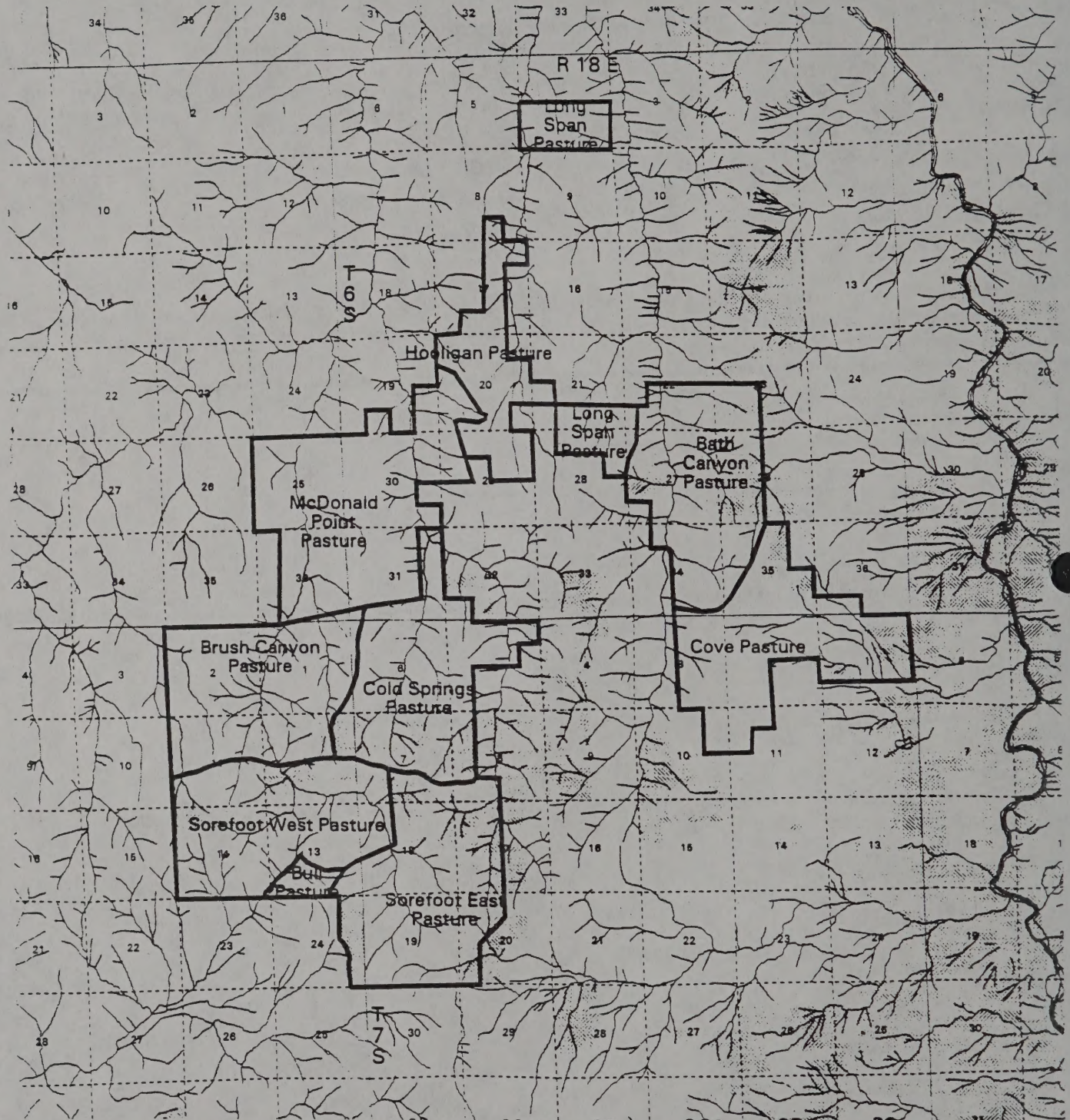
Riparian Information:

Hydrologic Information:

Discussion:

The grazing system used is a spring/summer/fall system. Anadromous fish are not present within the allotment. Public land is upland in nature with approximately 0.5 of perennial stream.

Black Rock Allotment #02514



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



6 GABLE CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 5,025 Public	Active Preference: 209 AUM's	Seral Stages:	0 Climax
0 Private	Season of Use: 11/ 1/00 - 4/15/00		0 Late Seral
<u>5,025 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	6.50 Perennial		0 Early Seral
Fish Habitat: 6.50 Miles	3.00 Intermittent		0 Unclassified
Steelhead Habitat: 6.50 Miles	0.00 Ephemeral		
	<u>9.50 Total</u>		

Steelhead habitat is a combination of migratory, spawning and rearing habitat.

Grazing Management:

Grazing occurs in this allotment for a total of thirty days in the winter sometime between November 1 and April 15.

Monitoring Information:

There are three trend photo plots within the allotment that indicate an upward trend.

Fisheries Information:

The allotment contains portions of three perennial streams and two intermittent streams: Bridge, Gable, and Nelson; and Mud and Weddle respectively. Steelhead are known to occur within Bridge Creek and Gable Creek, primarily using these streams as spawning and rearing habitat.

Riparian Information:

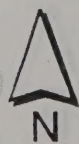
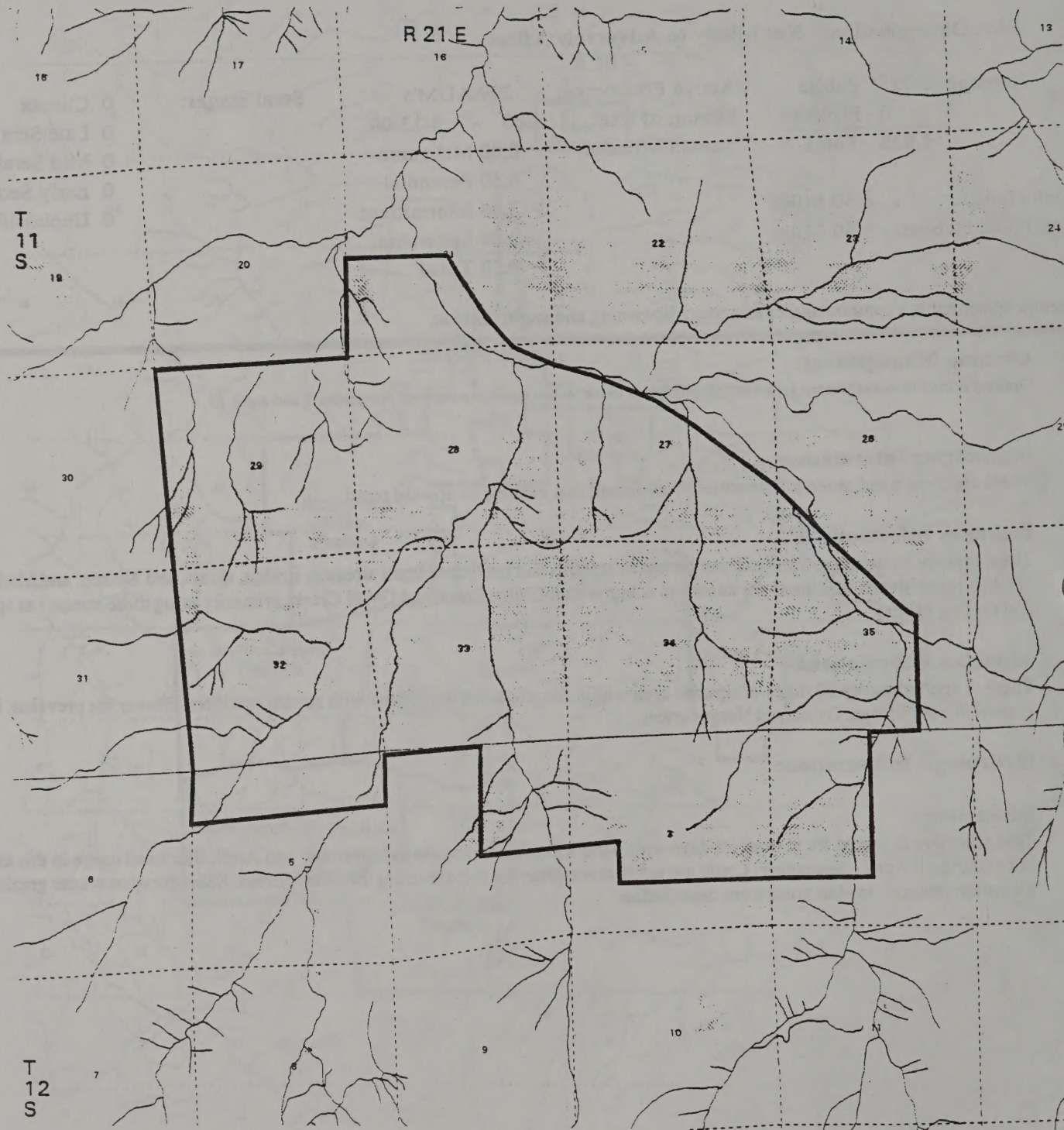
There is approximately 10 miles of riparian area within this allotment associated with stream corridors. Beaver are prevalent in the system in both Bridge, Gable and Nelson creeks.

Hydrologic Information:

Discussion:

This allotment is grazed for at most 30 days within the winter season between November and April. Steelhead usage in this area does not occur until April - September. Cattle are not present when the fish are using the stream areas. Short duration winter grazing in the allotment protects riparian areas from degradation.

Gable Creek Allotment #02516



520 SMITH POINT

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 2.596	Public	Active Preference:	36 AUM's	Seral Stages:	552 Climax
	0 Private	Season of Use:	4/ 1/00 - 9/30/00		999 Late Seral
	<u>2,596</u>	Stream Mileage:	3.00 Mainstem		0 Mid Seral
Fish Habitat:	3.00 Miles		3.00 Perennial		949 Early Seral
Steelhead Habitat:	3.00 Miles		0.00 Intermittent		96 Unclassified
			<u>0.00 Ephemeral</u>		
			3.00 Total		

Steelhead habitat is strictly migratory within the John Day river through this allotment.

Grazing Management:

The season of use on this allotment is from April 1 to September 30. A 1998 decision record authorized the construction of approximately 2 miles of riparian fence that would function to keep cattle away from the river and the associated riparian zone for the length of the allotment. this fence is now completed.

Monitoring Information:

Fisheries Information:

Steelhead habitat is strictly migratory through the allotment within the mainstem John Day river. No other perennial streams exist within the allotment boundaries.

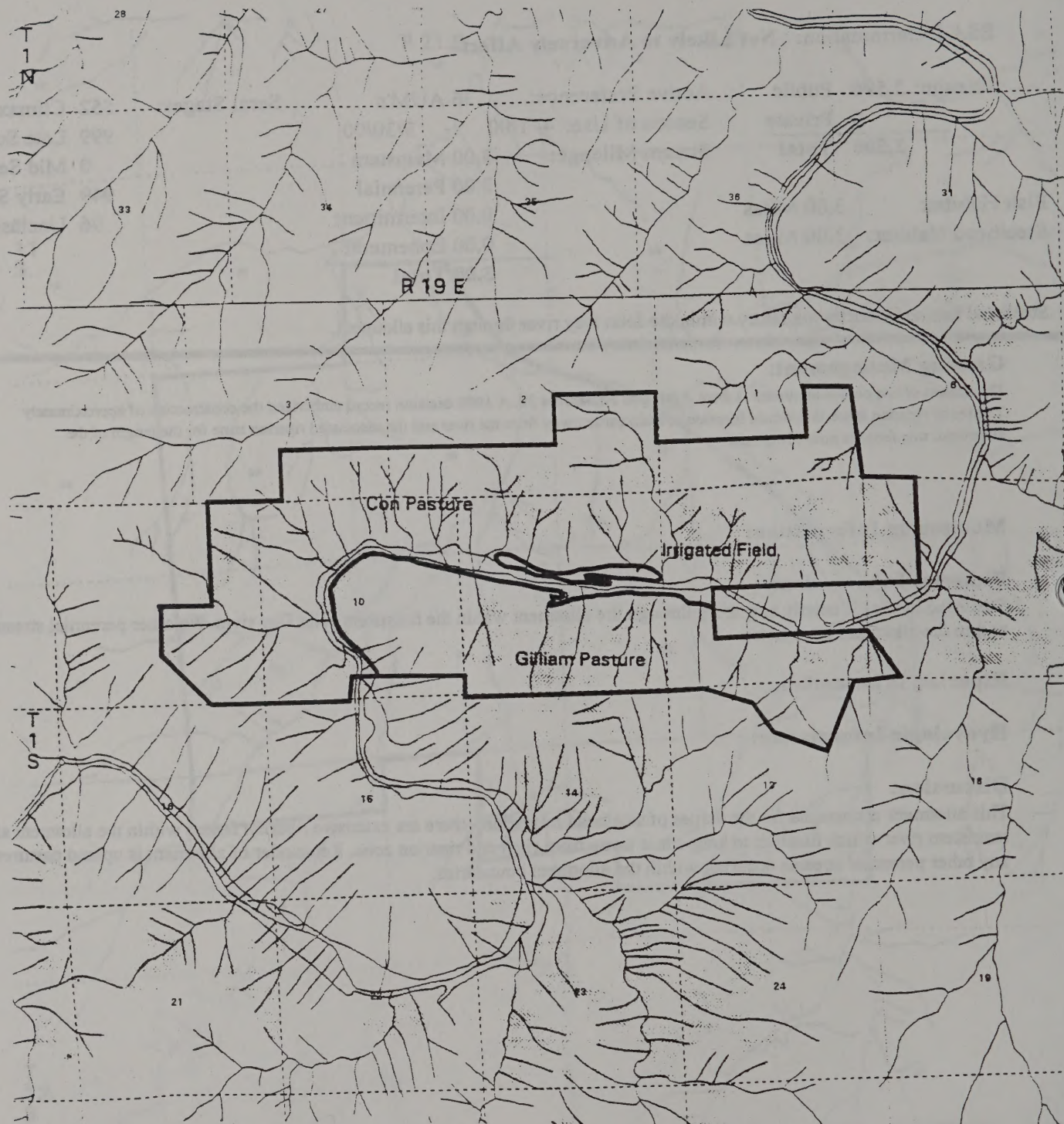
Riparian Information:

Hydrologic Information:

Discussion:

This allotment is managed for the values of steelhead migration - there are extensive riparian fences within the allotment along the mainstem river which function to keep cattle away from river and riparian zone. Remainder of allotment is upland pastures without any other perennial streams occurring within the allotment boundaries.

Smith Point Allotment #02520



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



Kahler Creek
Allotment #05253

73 KAHLER CREEK

ESA Determination: Not Likely to Adversely Affect

Acreage:	130 Public	Active Preference:	2 AUM's	Seral Stages:	10 Climax
	0 Private	Season of Use:	5/ 1/00 - 6/30/00		44 Late Seral
	<u>130 Total</u>	Stream Mileage:	0.00 Mainstem		39 Mid Seral
			0.05 Perennial		36 Early Seral
Fish Habitat:	0.05 Miles		0.60 Intermittent		1 Unclassified
Steelhead Habitat:	0.05 Miles		<u>0.00 Ephemeral</u>		
			0.65 Total		

Grazing Management:

This allotment is grazing from March 1 to April 30.

Monitoring Information:

There is one trend study plot established in this allotment.

Fisheries Information:

Kahler creek is in degraded condition,. Portions of the creek provide spawning and rearing habitat for steelhead.

Riparian Information:

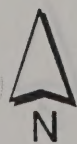
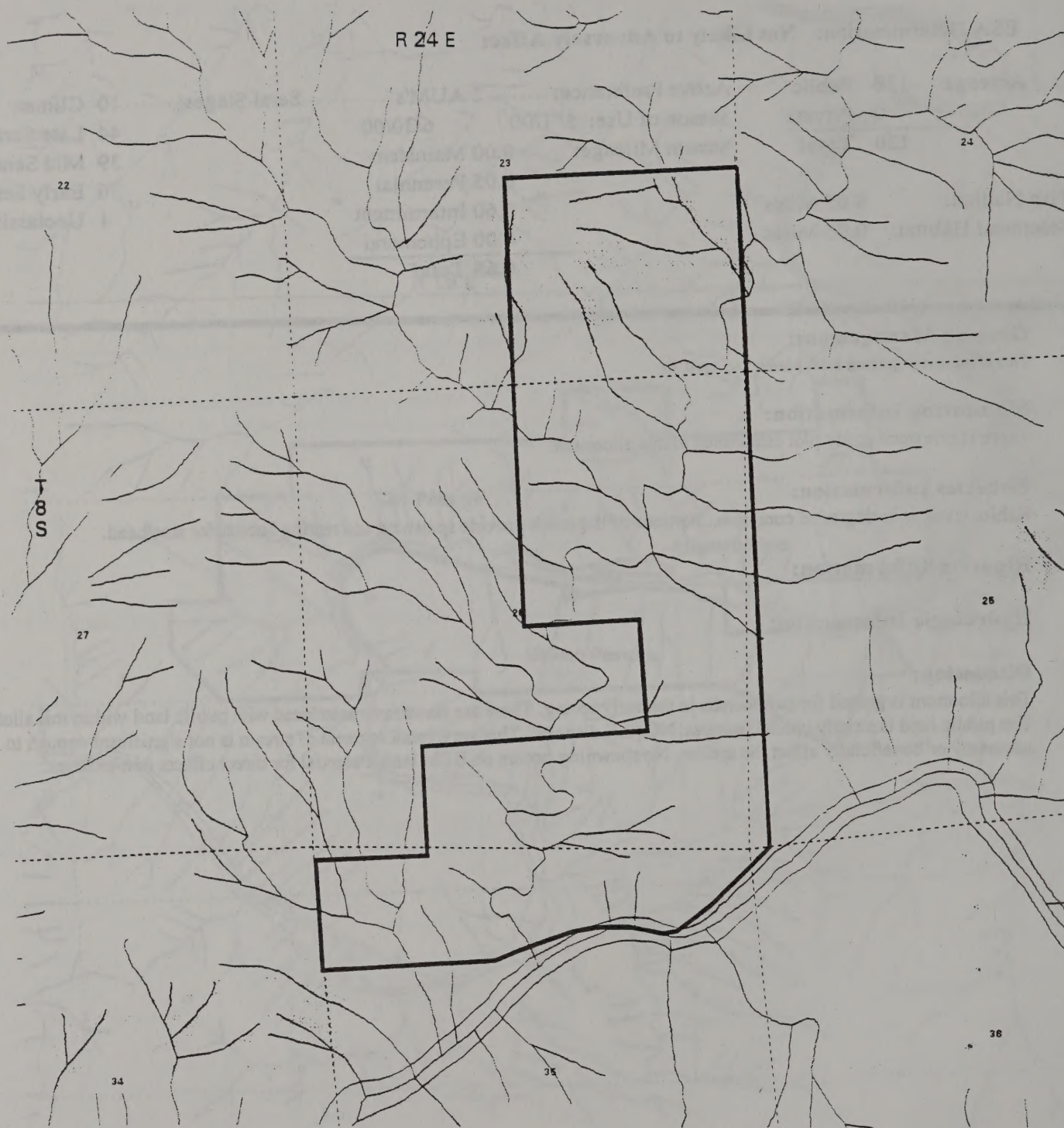
Hydrologic Information:

Discussion:

This allotment is grazed for two months in the early spring. There are no streams associated with public land within this allotment. The public land is strictly upland pastures. NOALE disposal. This very small segment of stream is not significant enough to adversely or beneficially affect the species. No spawning occurs on BLM land. Potential for direct effects non-existent.

Kahler Creek Allotment #02523

R 24 E



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



24 BUCK HOLLOW

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 441 Public	Active Preference: 10 AUM's	Seral Stages: 123 Climax
4,480 Private	Season of Use: 5/ 1/00 - 9/30/00	169 Late Seral
<u>4,921 Total</u>	Stream Mileage: 0.00 Mainstem	132 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.25 Intermittent	17 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>0.25 Total</u>	

Grazing Management:

Monitoring Information:

There are no monitoring studies on this allotment.

Fisheries Information:

There is no perennial stream habitat within public land on this allotment. Fish potential is zero.

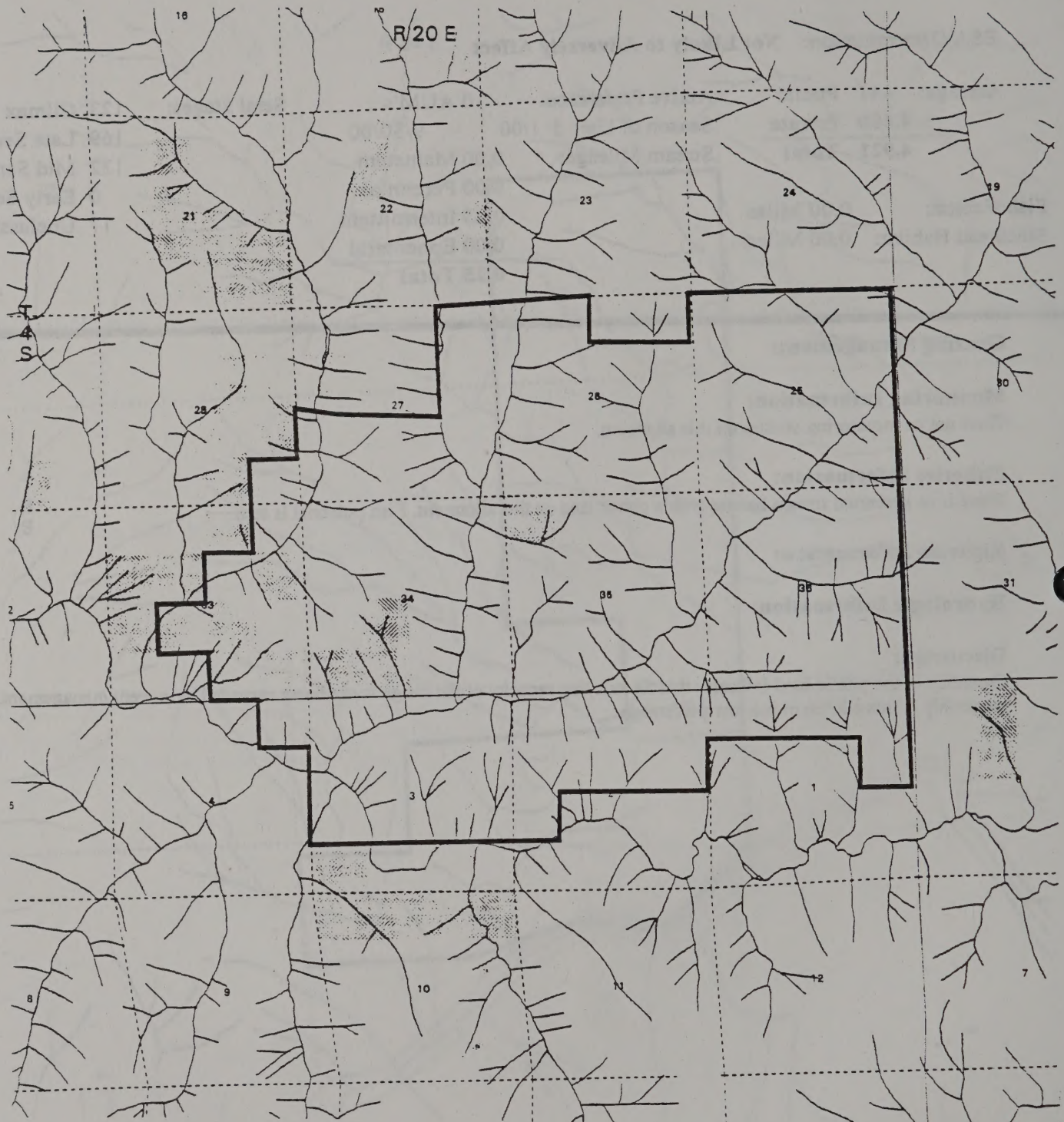
Riparian Information:

Hydrologic Information:

Discussion:

Condition of the public land indicates that the carrying capacity of the range is not being exceeded by current management. Public ownership in this allotment is a low percentage.

Buck Hollow Allotment #02524



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



75 ROCK CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 2,074 Public	Active Preference: 231 AUM's	Seral Stages: 0 Climax
9,889 Private	Season of Use: 3/ 1/00 - 2/28/00	930 Late Seral
<u>11,963 Total</u>	Stream Mileage: 0.00 Mainstem	780 Mid Seral
	0.00 Perennial	287 Early Seral
Fish Habitat: 0.00 Miles	0.00 Intermittent	77 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>0.00 Total</u>	

Grazing Management:

Monitoring Information:

There are two trend study plots located on this allotment.

Fisheries Information:

There is no perennial stream habitat within public land on this allotment. Fish potential is zero.

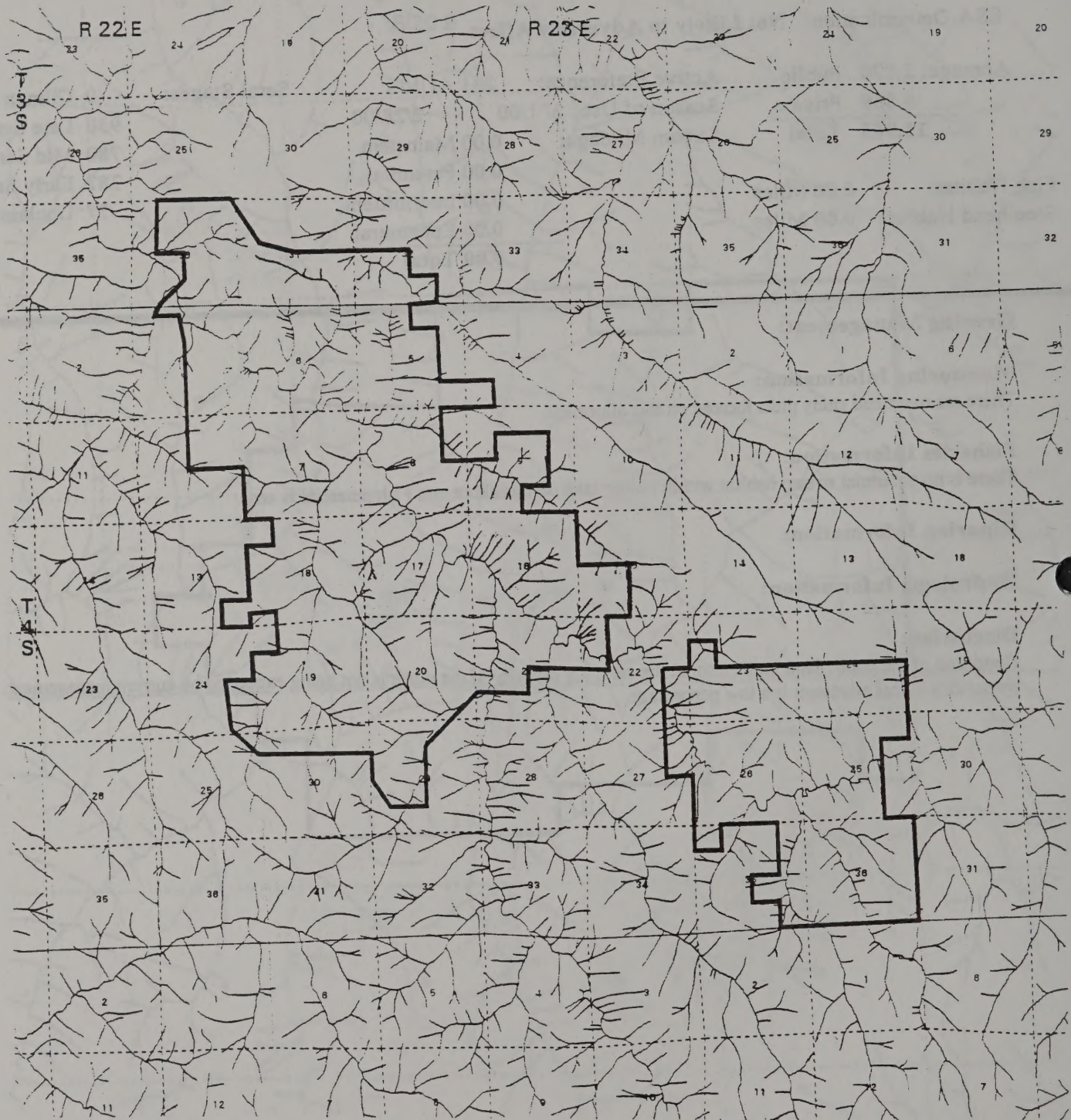
Riparian Information:

Hydrologic Information:

Discussion:

Condition of the public land indicates that the carrying capacity of the range is not being exceeded by current management. Public ownership in this allotment is a low percentage.

Rock Creek Allotment #02525



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



2531 CIRCLE BAR

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 19,708 Public	Active Preference: 318 AUM's	Seral Stages: 0 Climax
0 Private	Season of Use: 11/1/00 - 5/30/00	3,852 Late Seral
<u>19,708 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	6.50 Perennial	1,246 Early Seral
Fish Habitat: 6.50 Miles	1.00 Intermittent	196 Unclassified
Steelhead Habitat: 6.50 Miles	0.00 Ephemeral	
	<u>7.50 Total</u>	

Steelhead habitat in this allotment is a combination of migratory, spawning and rearing in the mainstem Bridge Creek.

Grazing Management:

Season of use: Cattle, 11/1-4/1, and sheep 4/1 - 5/30. Half the total AUM's (318) may be authorized for cattle use and half for sheep use or all the AUM's may be used for cattle use. The maximum number of AUM's allowed during the spring period will be 318, but all the AUM's may be authorized during the fall/winter period.

Cattle grazing stipulations: 1. Livestock within approximately one-half mile of Bridge Creek or Meyers Canyon will be herded as needed to establish a pattern of grazing which is out of the riparian zones. 2. Utilization of riparian vegetation along Bridge creek, by livestock, will be no greater than an average use level of 20% during the winter season. The allowable average use during April and May will be no greater than 30%. If a higher average use level continues, grazing may be terminated for the remainder of the use period.

Sheep grazing stipulations: There will be two use areas - the west and east sides of Bridge Creek. Half the AUMs (318) could be used during the spring and half (319) during the fall/winter, or the entire 637 AUMs in the fall/winter.

1. Sheep will be herded while using public land. 2. Locations for sheep camps and sheep bedding areas will be determined prior to any grazing use. 3. Utilization of riparian vegetation along Bridge Creek, by livestock, will be no greater than an average use level of 20% during the winter season. The allowable average use during April and May will be no greater than 30%. If a higher average use level continues, grazing may be terminated for the remainder of the use period. No use will be allowed in the bottom of Meyers Canyon. 4. Grazing use by sheep, on bitterbrush, will be no greater than 10% of the current years growth in the following locations: T11S, R22E, Sec 5 W1/4SW1/4, 6, 7, 8 W1/2W1/2, and T11S, R21E, Secs. 11 SE1/4, 12, 13, 14, 23 N1/2 and 24 NW1/4NW1/4. 5. Grazing or trailing sheep will be avoided across rocky scabby soils and exposed clay slopes with little vegetation. These soils are extremely erosive.

Monitoring Information:

Fisheries Information:

There is approximately 6.5 miles of perennial stream offering steelhead habitat in Bridge Creek within this allotment.

Riparian Information:

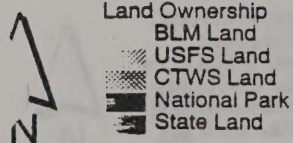
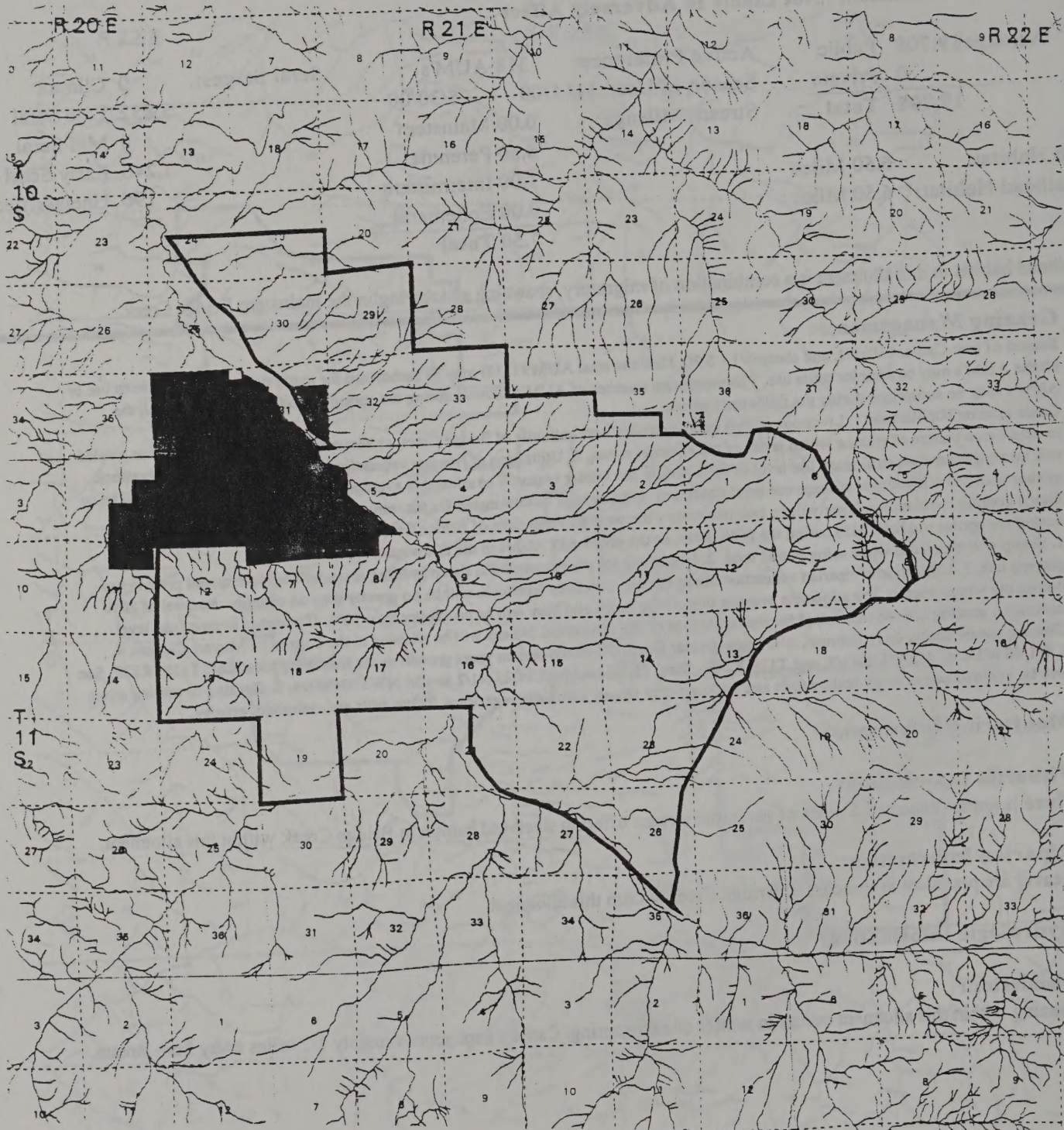
Beaver are prevalent in stretches of Bridge Creek within this allotment.

Hydrologic Information:

Discussion:

Grazing within this allotment occurs in winter or early spring. Cattle are kept approximately 1/2 miles away from stream.

Circle Bar Allotment #02531



2532 TOM COLE

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,633	Public	Active Preference:	102 AUM's	Seral Stages:	21 Climax
18,483	Private	Season of Use: 4/ 1/00	- 12/15/00		864 Late Seral
20,116	Total	Stream Mileage:	1.00 Mainstem		54 Mid Seral
			1.00 Perennial		634 Early Seral
Fish Habitat:	1.00 Miles		0.00 Intermittent		60 Unclassified
Steelhead Habitat:	1.00 Miles		0.00 Ephemeral		
			1.00 Total		

Steelhead habitat is associated with the mainstem John Day River in this allotment and is strictly migratory habitat.

Grazing Management:

The season of use is April 1 to December 15. Within this time span the permittees use is inconsistent in this allotment on a year to year basis. This allotment has a preference of 102 AUM's.

Monitoring Information:

There are no study plots within this allotment.

Fisheries Information:

The fisheries resource directly related to this allotment is a 1 miles stretch of the John Day River, which provides migratory habitat for steelhead.

Riparian Information:

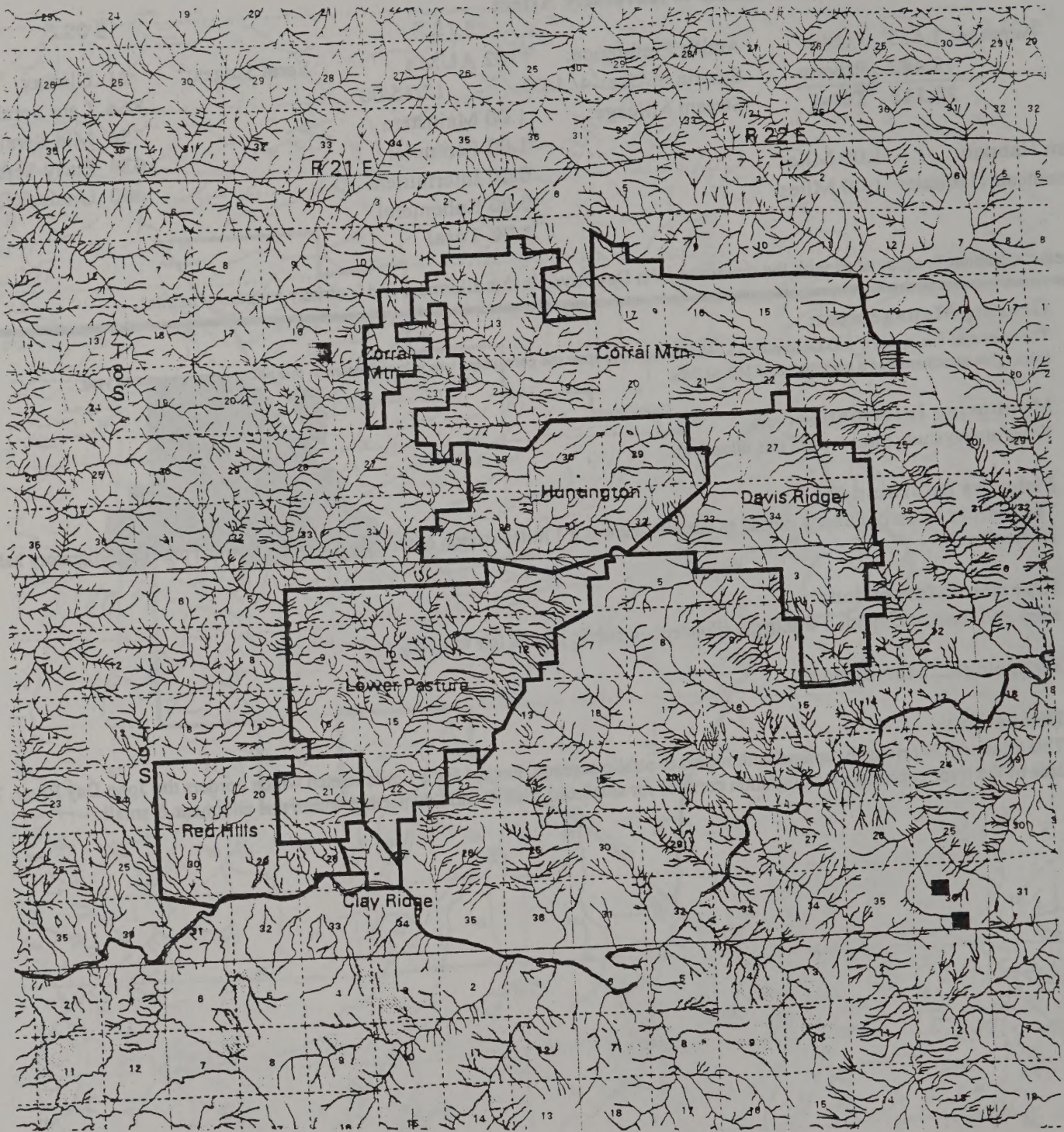
Bank and riparian condition within the allotment on public land is fair to good.

Hydrologic Information:

Discussion:

This allotment is primarily upland with regard to public acreage, except for a 1 mile stretch which borders the John Day River. This area of the river is primarily a migration corridor for steelhead. Public land ownership within this allotment is small.

Tom Cole Allotment #02532



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



2533 SUTTON MOUNTAIN

ESA Determination: **Not Likely to Adversely Affect**

Acreage	25,315	Public	Active Preference:	489 AUM's	Seral Stages:	897 Climax
	0	Private	Season of Use:	4/ 1/00 - 12/31/00		1,911 Late Seral
	<u>25,315</u>	Total	Stream Mileage:	3.50 Mainstem		988 Mid Seral
				7.50 Perennial		2,940 Early Seral
Fish Habitat:	7.50 Miles			1.00 Intermittent		259 Unclassified
Steelhead Habitat:	7.50 Miles			<u>0.00 Ephemeral</u>		
				8.50 Total		

Steelhead habitat within this allotment is a combination of 3.5 miles of John Day River migratory corridor habitat and 4.0 miles of Bridge Creek spawning and rearing habitat.

Grazing Management:

This allotment has three large pastures, an enclosure, a riparian area and a riparian pasture. The riparian area of Bridge creek has been fenced and will be excluded from grazing pending a return to approved proper functioning condition. One large upland pasture is not currently being grazed. The other two upland pastures are grazed on a rotation system every year, 4/1-5/1 one year and 10/15-12/15 the next year.

Monitoring Information:

This allotment has twelve trend study plots established.

Fisheries Information:

Approxiamtely 7.5 miles of anadromous habitat is located on this allotment. 3.5 miles is strictly migratory corridor along the John Day river, the other 4.0 miles consits of spawning and rearing habitat located in Bridge Creek.

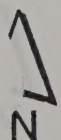
Riparian Information:

Hydrologic Information:

Discussion:

The riparian areas have been fenced off from grazing pending a return to proper functioning condition, the grazing on the upland areas of the allotment is a spring, late fall rotation system.

Sutton Mountain Allotment #02533



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



2535 HAYFIELD

ESA Determination: **Not Likely to Adversely Affect**

Acres:	345	Public	Active Preference:	11 AUM's	Seral Stages:	0 Climax
	2,360	Private	Season of Use:	5/20/00 - 11/ 4/00		301 Late Seral
	<u>2,705</u>	Total	Stream Mileage:	0.50 Mainstem		31 Mid Seral
				0.50 Perennial		0 Early Seral
Fish Habitat:	0.50 Miles			0.00 Intermittent		13 Unclassified
Steelhead Habitat:	0.50 Miles			<u>0.00 Ephemeral</u>		
				0.50 Total		

Steelhead habitat is migratory corridor related to the mainstem John Day River.

Grazing Management:

The season of use is May 20 to November 4. There are two small pastures along the John Day river and one upland pasture. Condition of the public land indicates that the carrying capacity of the range is not being exceeded by current management.

Monitoring Information:

There are no permanent monitoring sites on the allotment.

Fisheries Information:

Anadromous fish usage of the allotment is limited primarily to passage.

Riparian Information:

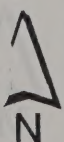
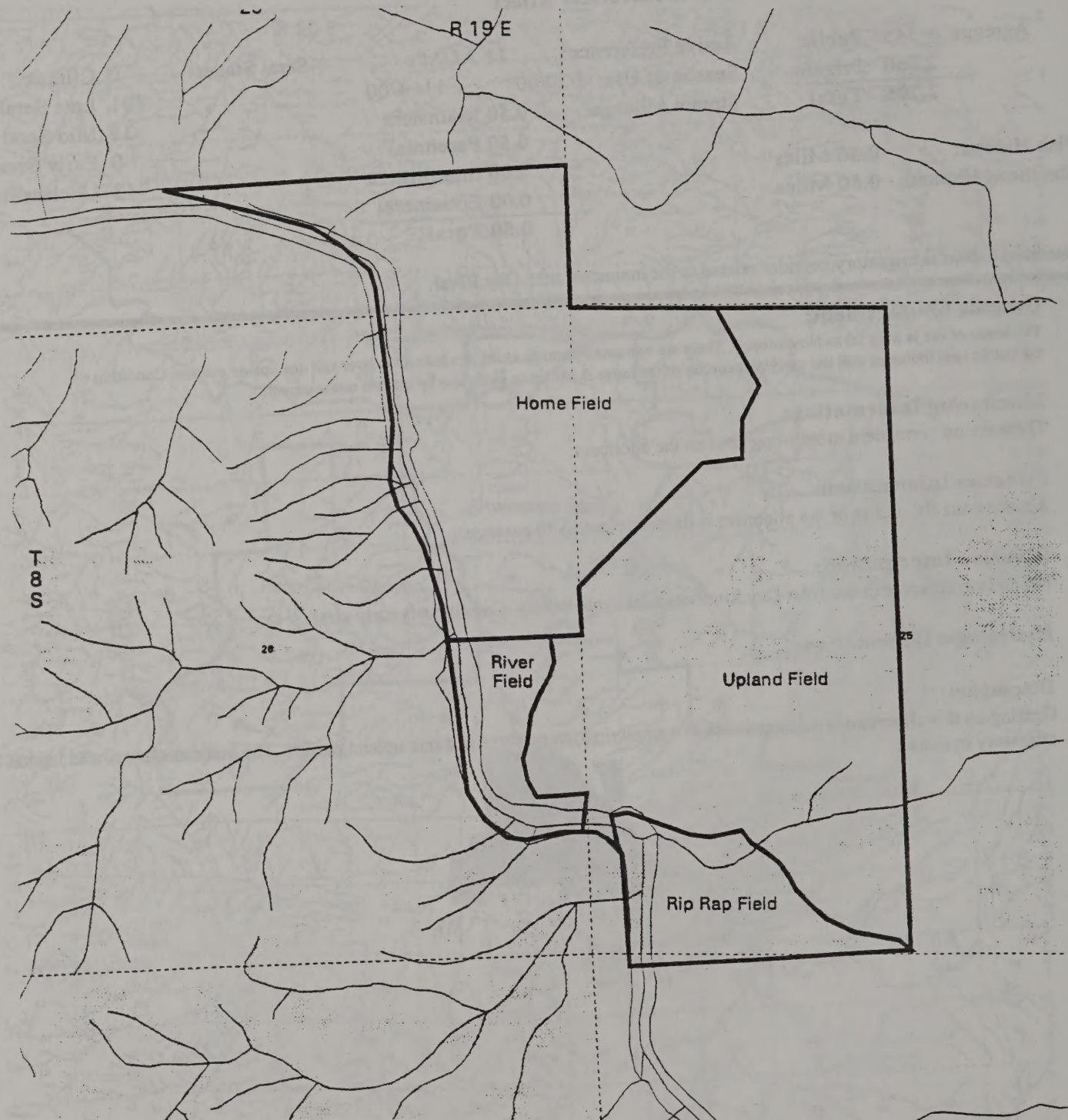
Public land adjacent to the John Day River contains some willow. Condition is early seral.

Hydrologic Information:

Discussion:

Grazing on this allotment is managed with two small riparian pastures and one upland pasture. The associated steelhead habitat is migratory in nature.

Hayfield Allotment #02535



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



2544 CIRCLE S RANCH

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 518 Public	Active Preference: 9 AUM's	Seral Stages: 0 Climax
1,280 Private	Season of Use: 4/ 1/00 - 12/31/00	0 Late Seral
<u>1,798 Total</u>	Stream Mileage: 0.75 Mainstem	499 Mid Seral
	0.75 Perennial	0 Early Seral
Fish Habitat: 0.75 Miles	0.00 Intermittent	19 Unclassified
Steelhead Habitat: 0.75 Miles	0.00 Ephemeral	
	<u>0.75 Total</u>	

Steelhead habitat is strictly migratory along the John Day river corridor in this allotment.

Grazing Management:

The permittees run about 25 head of cattle in this allotment every year within the current season of use April 1 to December 31.

Monitoring Information:

There are two photo trend studies within the allotment. They consist of one upland and one riparian or riverbank study. Between 1989 and 1994 there has been an increase in the number of subalpine needlegrass (*Sipa comata*) plants in the upland study. In the riparian study no change was observed.

Fisheries Information:

The fisheries resource directly related to the Circle S. Ranch Allotment is the mainstem John Day River for approximately 0.75 miles.

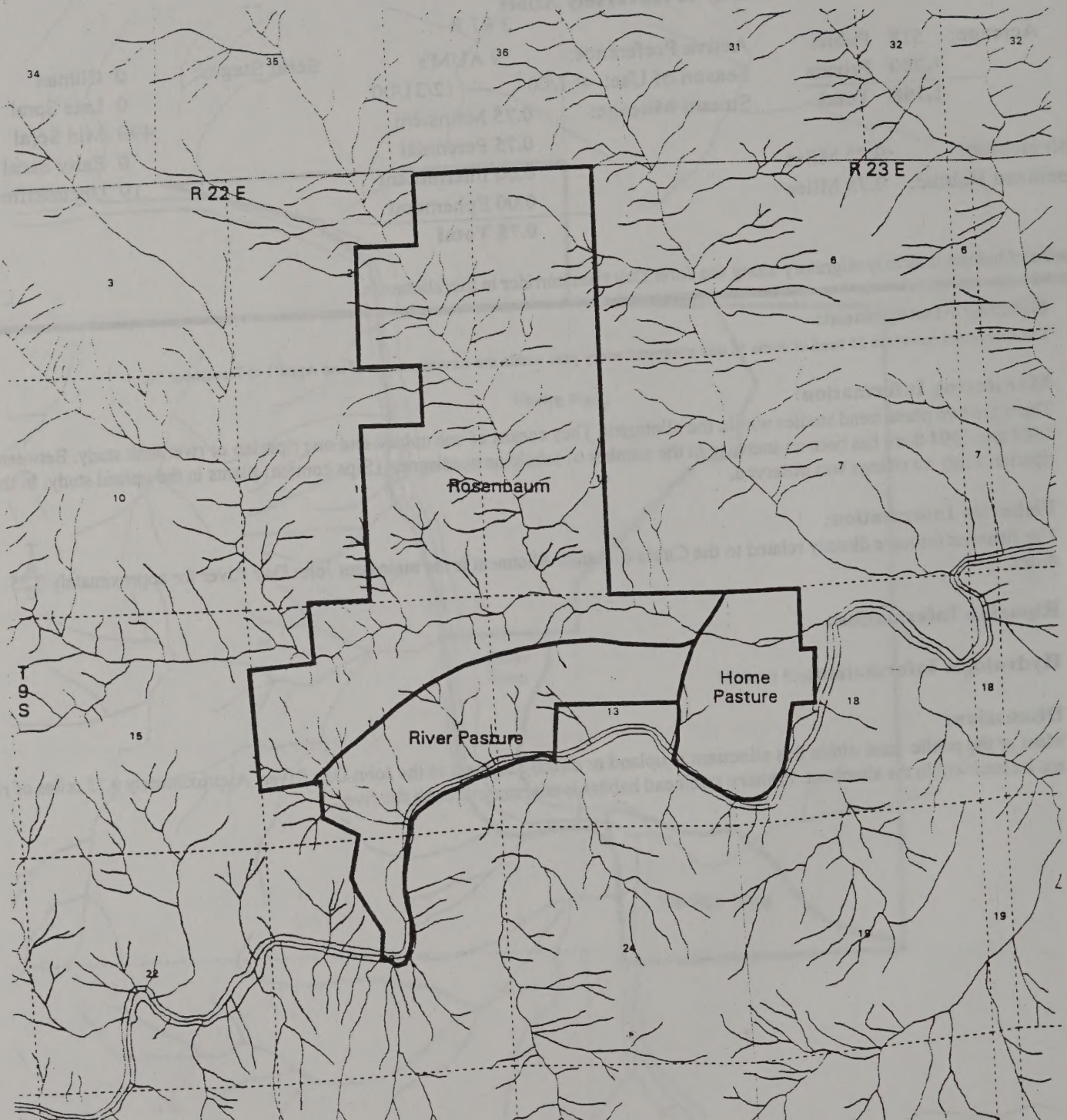
Riparian Information:

Hydrologic Information:

Discussion:

Most of the public land within this allotment is upland or directly adjacent to the John Day River. Approximately 0.75 miles of river are located within the allotment. Primary steelhead habitat is migratory through the river.

Circle S Ranch Allotment #02544



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



2545 CHERRY CREEK

ESA Determination: Not Likely to Adversely Affect

Acreage: 1.095	Public	Active Preference:	438 AUM's	Seral Stages:	892 Climax
41,317	Private	Season of Use:	3/ 1/00 - 2/28/00		3,759 Late Seral
52,412	Total	Stream Mileage:	0.50 Mainstem		3,362 Mid Seral
			0.50 Perennial		3,082 Early Seral
Fish Habitat:	0.50 Miles		0.00 Intermittent		0 Unclassified
Steelhead Habitat:	0.50 Miles		0.00 Ephemeral		
			0.50 Total		

Steelhead habitat is strictly migratory along the John Day river corridor in this allotment.

Grazing Management:

The season of use on this allotment is year long from March 1 to February 28. The allotment contains thirteen pastures and rotations and actual use dates are unknown. Condition of the public land indicates that the carrying capacity of the range is not exceeded by current management.

Monitoring Information:

One photo study on the allotment indicates a static trend. Utilization does not appear excessive. The observed apparent trend is upward. The upland areas appear to be in excellent condition.

Fisheries Information:

The fish resource directly related to this allotment is the John Day river for approximately 0.5 miles. As a result of permanent channel blockage, anadromous fish do not appear to access Cherry Creek. Resident trout are present in Cherry Creek.

Riparian Information:

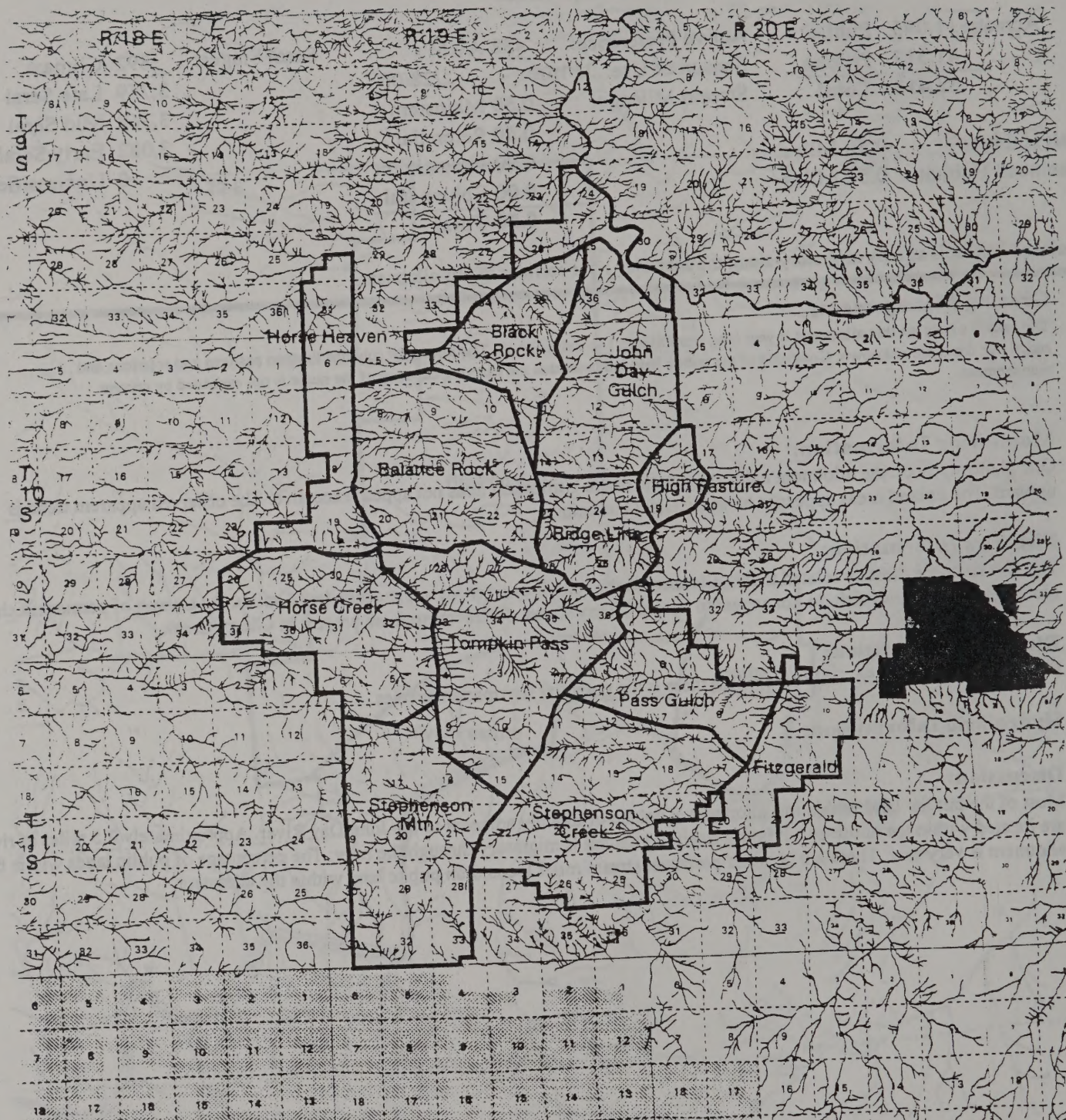
Public land contains very little area where there is the potential for riparian species.

Hydrologic Information:

Discussion:

Most of the public land within this allotment is upland or directly adjacent to the John Day River. Approximately 0.5 miles of river are located within the allotment. Primary steelhead habitat is migratory through the river. The percentage of public lands within this allotment is very low. There are no other perennial stream miles located on public land within the allotment.

Cherry Creek Allotment #02545



- Land Ownership
- BLM Land
 - USFS Land
 - CTWS Land
 - National Park
 - State Land



3551 CLINTON O. HARRIS

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 934 Public	Active Preference: 64 AUM's	Seral Stages: 0 Climax
36,566 Private	Season of Use: 5/ 1/00 - 7/15/00	377 Late Seral
<u>37,500 Total</u>	Stream Mileage: 0.00 Mainstem	869 Mid Seral
	0.80 Perennial	340 Early Seral
Fish Habitat: 0.80 Miles	2.00 Intermittent	60 Unclassified
Steelhead Habitat: 0.80 Miles	0.00 Ephemeral	
	<u>2.80 Total</u>	

Grazing Management:

BLM lands within two pastures that are grazed between 5/1 to 7/15. Actual use averaged 64 AUM's between 1987 and 1997. Topography and vegetation restrict livestock access to W. Fork Birch Creek.

Monitoring Information:

Utilization, one trend study, 1980 riparian and instream habitat survey.

Fisheries Information:

W. Fork Birch Creek supports spawning and rearing habitat for steelhead trout. Instream habitat was rated as poor, primarily for minimal pool habitat and spawning gravels. Instream wood was abundant and escape cover was fair. Stream shade was 80%, mainly from conifers.

Riparian Information:

Riparian habitat quality is good. Surrounding vegetation is primarily white fir climax forest, with ponderosa pine and douglas fir and western larch. Occasional shrubs are snowberry, currents, chokecherry, bitter cherry, and service berry. Pinegrass, bluegrass, and cheatgrass are common grasses along streambanks.

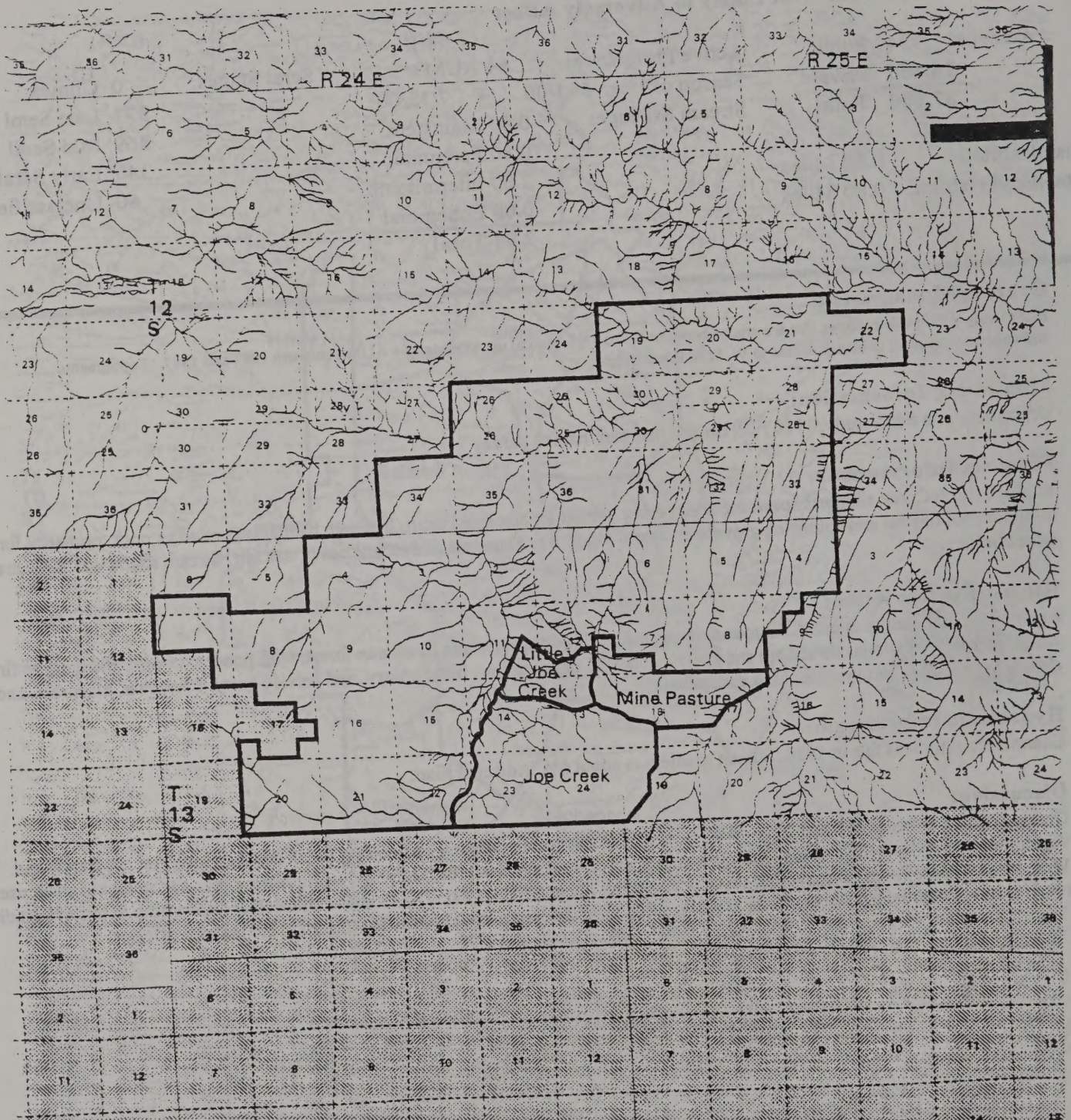
Hydrologic Information:

Channel stability was fair in 1980. Stream gradient is about 6%. Adjacent road.

Discussion:

Grazing occurs between 5/1 and 7/15. W. F. Birch Creek supports spawning and rearing for steelhead. However, topography and vegetation restrict livestock access to the stream and associated riparian area. Odfw spawning/rearing map for steelhead show use in W.F. Birch Creek. Potential spawning gravel and rearing habitat is minimal. The likelihood of steelhead spawning in this 6% gradient reach is low. Potential for direct effects are low. Good riparian condition indicates low potential for indirect effects.

Clinton O. Harris Allotment #02551



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



2556 MURRAY HOWARD

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1.045	Public	Active Preference:	43 AUM's	Seral Stages:	59 Climax
10,240	Private	Season of Use: 4/ 1/00	- 12/19/00		122 Late Seral
11,285	Total	Stream Mileage:	2.00 Mainstem		362 Mid Seral
			2.00 Perennial		463 Early Seral
Fish Habitat:	2.00 Miles		0.00 Intermittent		39 Unclassified
Steelhead Habitat:	2.00 Miles		0.00 Ephemeral		
			2.00 Total		

Fish habitat is associated with the mainstem John Day River which provides primarily steelhead migratory habitat through this allotment.

Grazing Management:

This allotment currently has an active preference of 43 AUM's with a season of use from April 1 to December 19. This allotment has been grazed but the numbers of livestock is very inconsistent from year to year ranging from 23 - 200.

Monitoring Information:

There are two photo trend studies within this allotment, one upland and one riparian. They show no change since 1989.

Fisheries Information:

The fisheries resource directly related to this allotment is the mainstem John Day River for approximately 2.0 miles, which is primarily migratory habitat for steelhead.

Riparian Information:

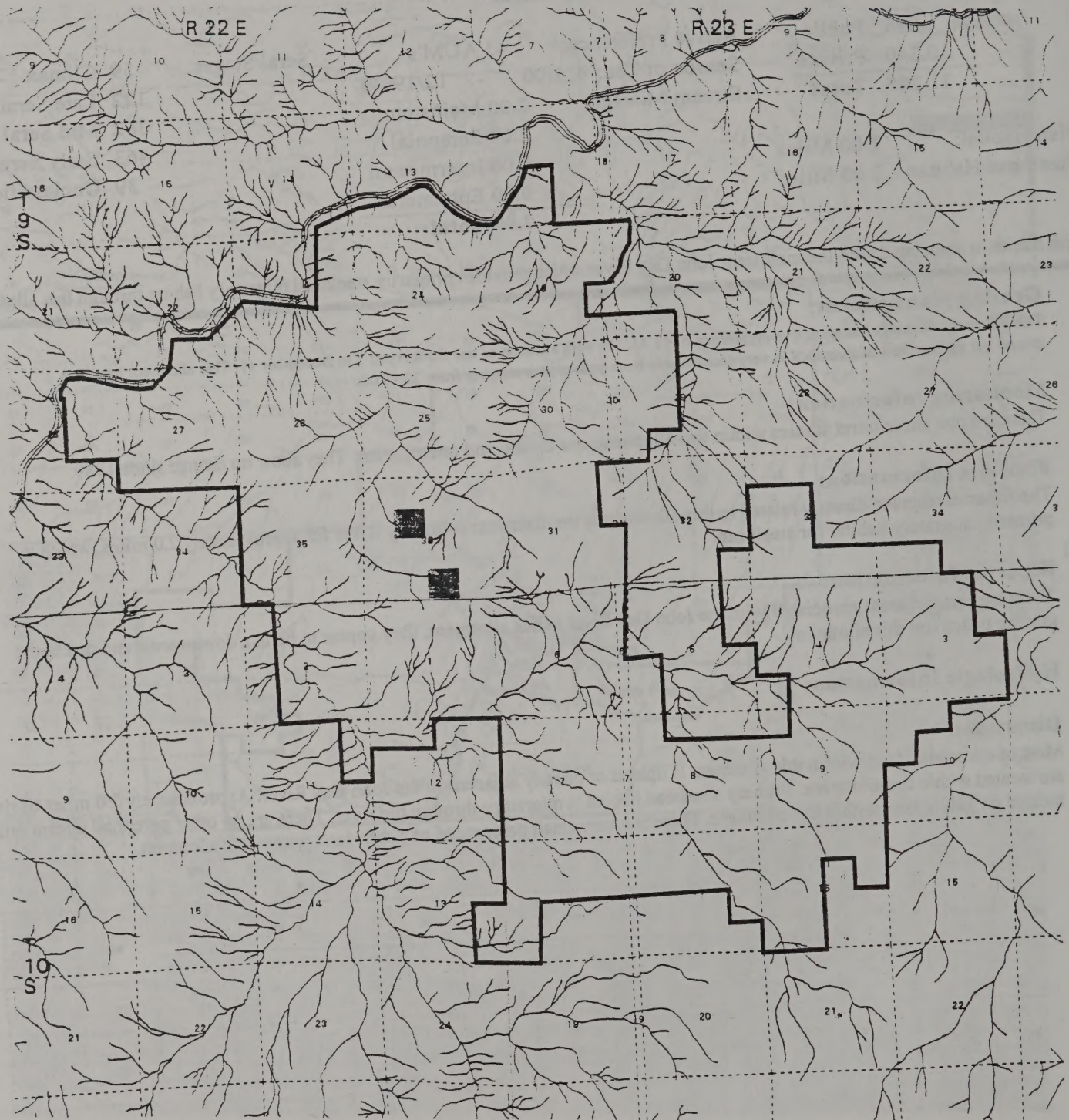
There are riparian areas associated with the John Day River in this allotment, they appear to be in a downward trend due to the grazing pattern on this allotment.

Hydrologic Information:

Discussion:

Most of the public land within this allotment is upland or directly adjacent to the John Day River. Approximately 2.0 miles of river are located within the allotment. Primary steelhead habitat is migratory through the river. There are no other perennial stream miles located on public land within the allotment. There is a very small percentage of public land within this allotment.

Murray Howard Allotment #02556



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



2560 BASELINE

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 598 Public	Active Preference: 30 AUM's	Seral Stages: 17 Climax
2,000 Private	Season of Use: 4/16/00 - 10/15/00	121 Late Seral
<u>2,598 Total</u>	Stream Mileage: 1.25 Mainstem	145 Mid Seral
	1.25 Perennial	293 Early Seral
Fish Habitat: 1.25 Miles	0.00 Intermittent	22 Unclassified
Steelhead Habitat: 1.25 Miles	0.00 Ephemeral	
	<u>1.25 Total</u>	

Fish habitat is associated with the mainstem John Day River which provides primarily steelhead migratory habitat through this allotment.

Grazing Management:

This allotment is divided into four pastures, two have public land - Baseline and Middle pastures. The grazing system is a flexible rotation schedule which allows every pasture to be used every year. The Baseline pasture is usually grazed for two months in the spring. This pasture contains all the public land affecting the river.

Monitoring Information:

There are two trend study plots within the allotment in the Baseline pasture - 1 upland and one riparian.

Fisheries Information:

The fisheries resource directly related to this allotment is the mainstem John Day River for approximately 1.25 miles, which is primarily migratory habitat for steelhead.

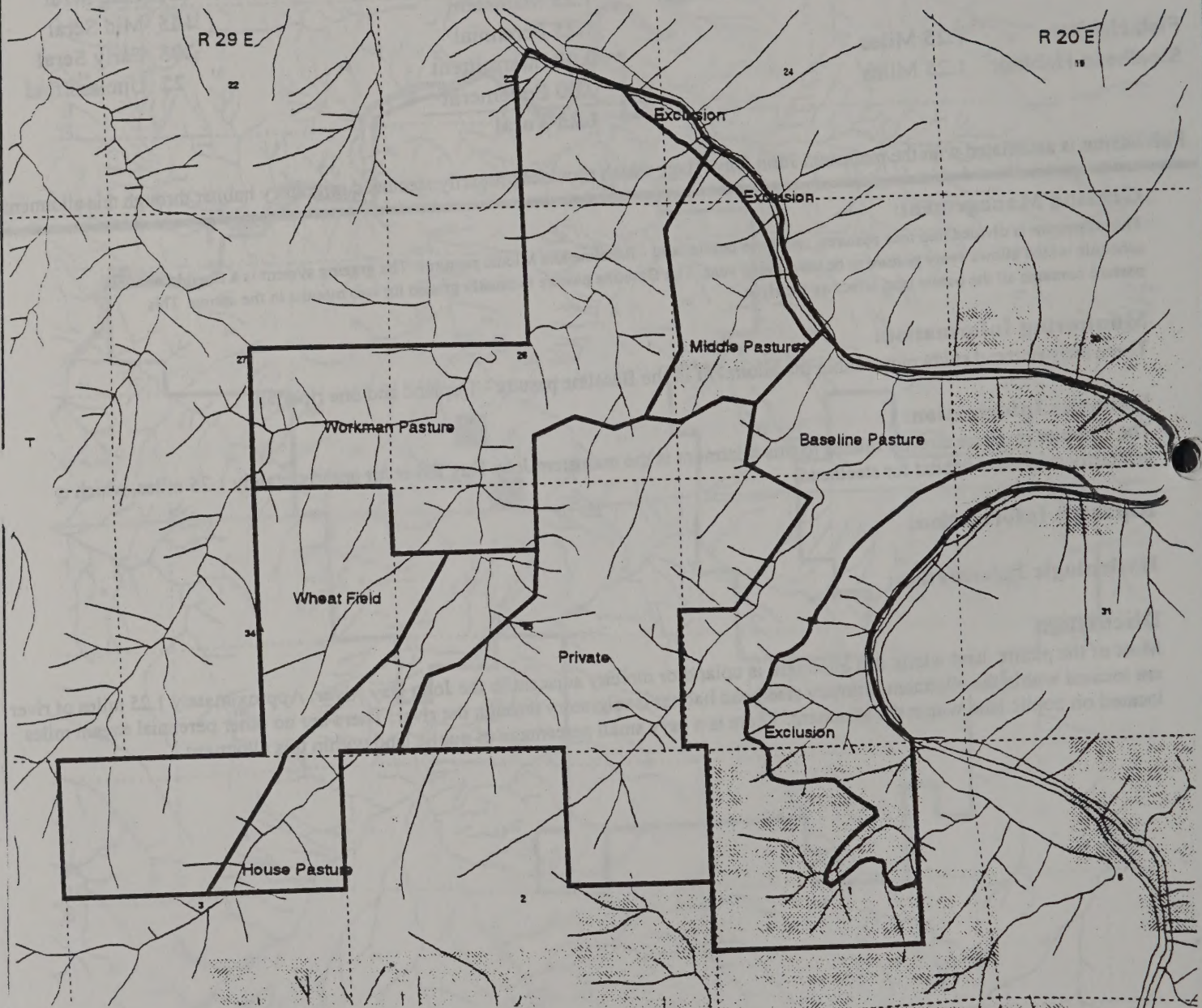
Riparian Information:

Hydrologic Information:

Discussion:

Most of the public land within this allotment is upland or directly adjacent to the John Day River. Approximately 1.25 miles of river are located within the allotment. Primary steelhead habitat is migratory through the river. There are no other perennial stream miles located on public land within the allotment. There is a very small percentage of public land within this allotment.

Baseline Allotment #02560



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



2561 GIRDS CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 587 Public	Active Preference: 61 AUM's	Seral Stages: 0 Climax
0 Private	Season of Use: 4/ 1/00 - 6/30/00	268 Late Seral
587 Total	Stream Mileage: 0.00 Mainstem	298 Mid Seral
	1.00 Perennial	0 Early Seral
Fish Habitat: 1.00 Miles	0.00 Intermittent	21 Unclassified
Steelhead Habitat: 1.00 Miles	0.00 Ephemeral	
	1.00 Total	

Fish habitat is potential spawning and rearing habitat in Girds Creek.

Grazing Management:

Season of use for cattle is 4/1-6/30. There is no established system for grazing. No livestock grazing will be authorized in the riparian pasture pending approved proper functioning condition of Girds Creek.

Monitoring Information:

There are four trend study plots within this allotment.

Fisheries Information:

There is approximately 1.0 mile of Girds Creek located on public land within this allotment. Girds Creek is a potential steelhead spawning and rearing stream.

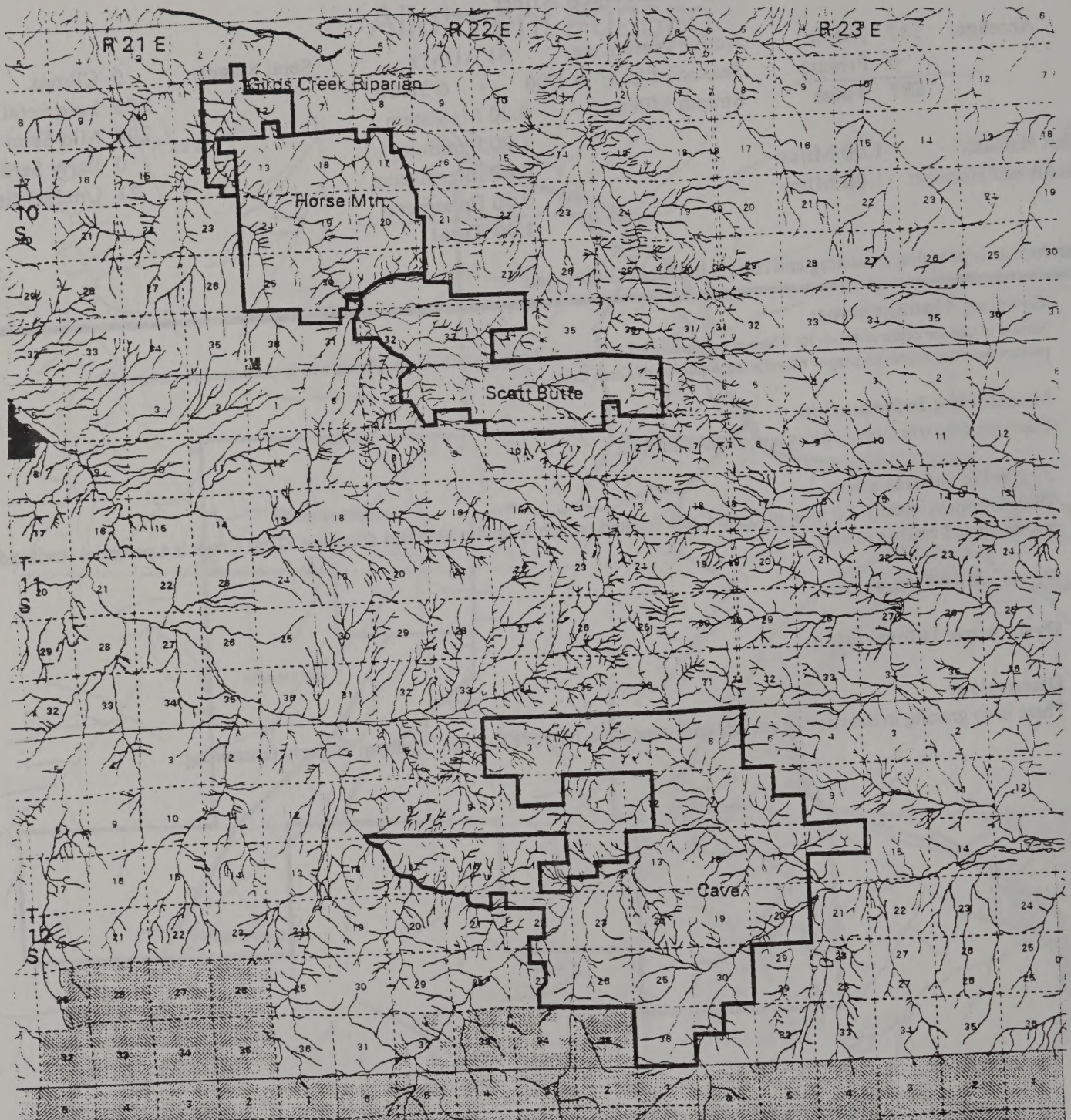
Riparian Information:

Hydrologic Information:

Discussion:

There is no grazing in the riparian pasture until conditions improve to a PFC rating of Properly functioning.

Girds Creek Allotment #02561



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



3 HORSESHOE CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,062 Public	Active Preference: 98 AUM's	Seral Stages: 0 Climax
18,684 Private	Season of Use: 4/ 1/00 - 10/31/00	160 Late Seral
<u>19,746 Total</u>	Stream Mileage: 4.90 Mainstem	530 Mid Seral
	5.10 Perennial	333 Early Seral
Fish Habitat: 5.10 Miles	2.10 Intermittent	39 Unclassified
Steelhead Habitat: 5.10 Miles	0.00 Ephemeral	
	<u>7.20 Total</u>	

Grazing Management:

The riparian area along the JDR is fenced off. Since 1998 livestock have grazed from 11/1-2/10. Actual use averaged 195 AUM's between 1988 and 1996.

Monitoring Information:

Utilization, one trend study, riparian photpoint. 1980 riparian inventory with photos on Horseshoe Creek.

Fisheries Information:

The JDR (4.9 miles on 5 segments) serves as a migratory corridor for juvenile and adult steelhead trout only. Steelhead move quickly through this habitat and tend to stay mainly in the river thalweg or deep pools. river margin habitat is not a significant source of cover utilized by migratory fish. The lower 0.2 miles of Horseshoe Creek flow through a deep open canyon. A small alluvial fan at the streams mouth limits fish movement at low flows. Channel is unstable and braided in this vicinity. Fish habitat rated fair above braided areas. Boulders/Cobble provide good escape cover, cover from trees/shrubs is minimal, and pool habitat minimal (4%), little spawning gravel. This segment probably provides minimal to moderate rearing for juvenile steelhead up to 6".

Riparian Information:

Riparian condition was rated as poor on Horseshoe Creek. /Riparian trees and shrubs were rare and scattered. Vegetative community above streambanks was dominated by sagebrush, juniper, pine, cheatgrass, and bunchgrasses. Vegetation appeared to be improving a time of survey (1980).

Hydrologic Information:

Channel stability good in Horseshoe Creek above the mouth/braided fan area, streambanks were well to moderately vegetated with grasses and forbes.

Discussion:

Winter grazing in allotment, riparian areas are fenced from allotment area. Spawning habitat at mouth of Horseshoe Creek marginal. Potential for direct effects negligible because of braided channel.

Horseshoe Creek Allotment #02563



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



65 LEROY A. BRITT

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 431 Public	Active Preference: 33 AUM's	Seral Stages: 0 Climax
8,100 Private	Season of Use: 4/15/00 - 11/3/00	210 Late Seral
<u>8,531 Total</u>	Stream Mileage: 0.00 Mainstem	205 Mid Seral
	0.20 Perennial	0 Early Seral
Fish Habitat: 0.30 Miles	0.10 Intermittent	16 Unclassified
Steelhead Habitat: 0.30 Miles	0.00 Ephemeral	
	<u>0.30 Total</u>	

Potential spawning and rearing habitat in Left Hand Creek.

Grazing Management:

Grazing use occurs from 4/15-5/31 on T9S, R25E, Sec 19 NE1/4NW1/4 (Left Hand Creek)

Monitoring Information:

1980 riparian stream habitat survey, riparian photopoints.

Fisheries Information:

Left Hand Creek seems to be potential habitat for steelhead trout, but no fish were present in 1980 survey. Stream gradient was 5% and it flows through a small narrow canyon. Stream size is very small (3.5' wide) with 96% riffle and cascades, 4% pools, and 40% bedrock substrate.

Riparian Information:

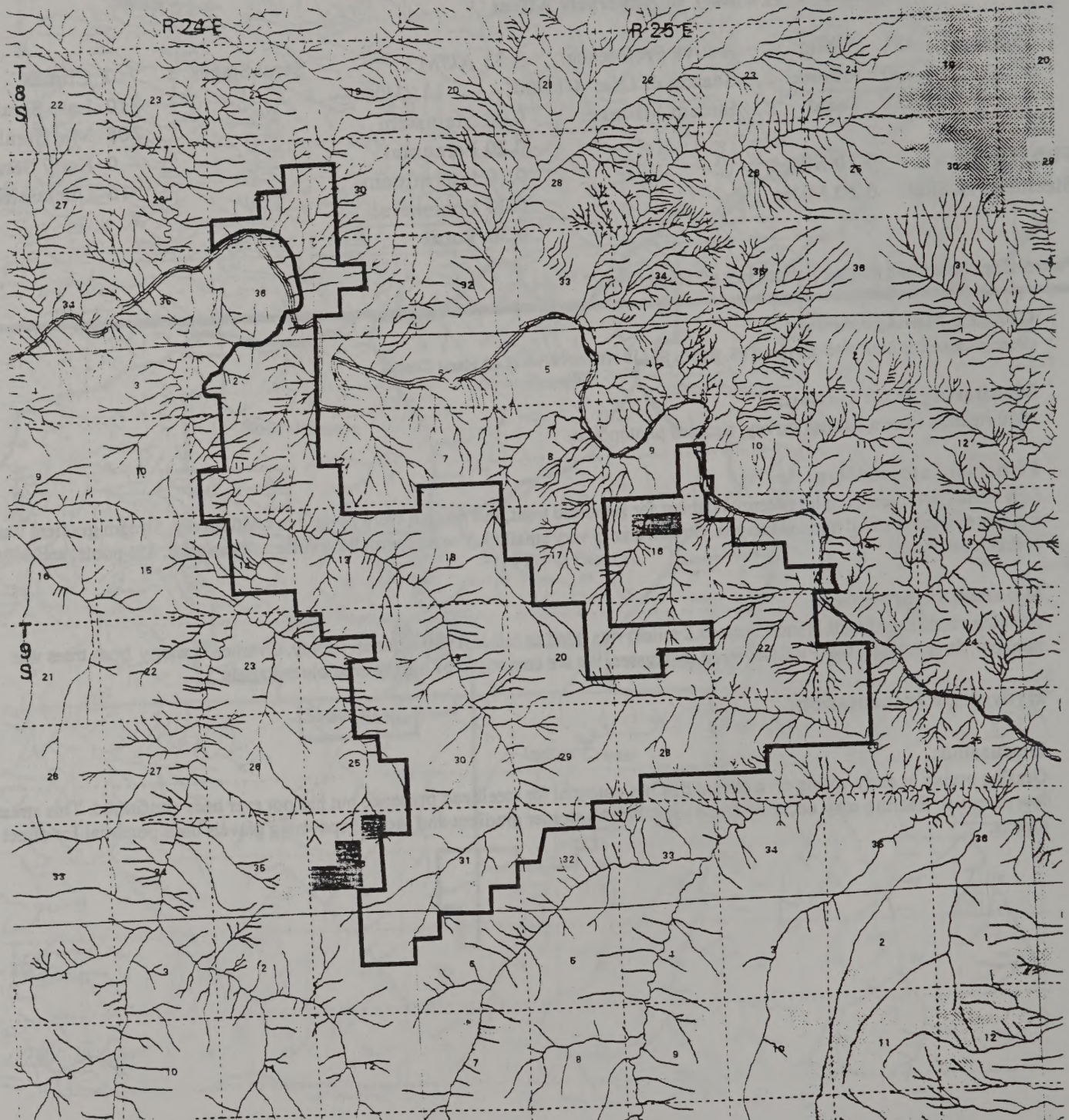
Riparian condition of Left Hand Creek (0.2 miles) was rated as fair in 1990 riparian survey. Overhead canopy from trees was minimal. Streambanks were well covered by grasses, but are composed of highly erodible materials.

Hydrologic Information:

Discussion:

Grazing occurs in early spring on a stream that has potential for steelhead presence but has not ever been confirmed. This stream has low potential. Rearing may occur on some years but the steeper gradient and lack of spawning gravels limit potential for direct effects.

Leroy A. Britt Allotment #02565



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



566 JUSTESEN

ESA Determination: **Not Likely to Adversely Affect**

Acreage:	113 Public	Active Preference:	3 AUM's	Seral Stages:	9 Climax
	0 Private	Season of Use:	3/16/00 - 4/30/00		38 Late Seral
	113 Total	Stream Mileage:	0.00 Mainstem		34 Mid Seral
			0.00 Perennial		31 Early Seral
Fish Habitat:	0.00 Miles		0.50 Intermittent		1 Unclassified
Steelhead Habitat:	0.00 Miles		0.00 Ephemeral		
			0.50 Total		

Grazing Management:

Grazing is authorized from 3/16-4/30.

Monitoring Information:

Fisheries Information:

There is no known fisheries resource within this allotment.

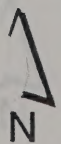
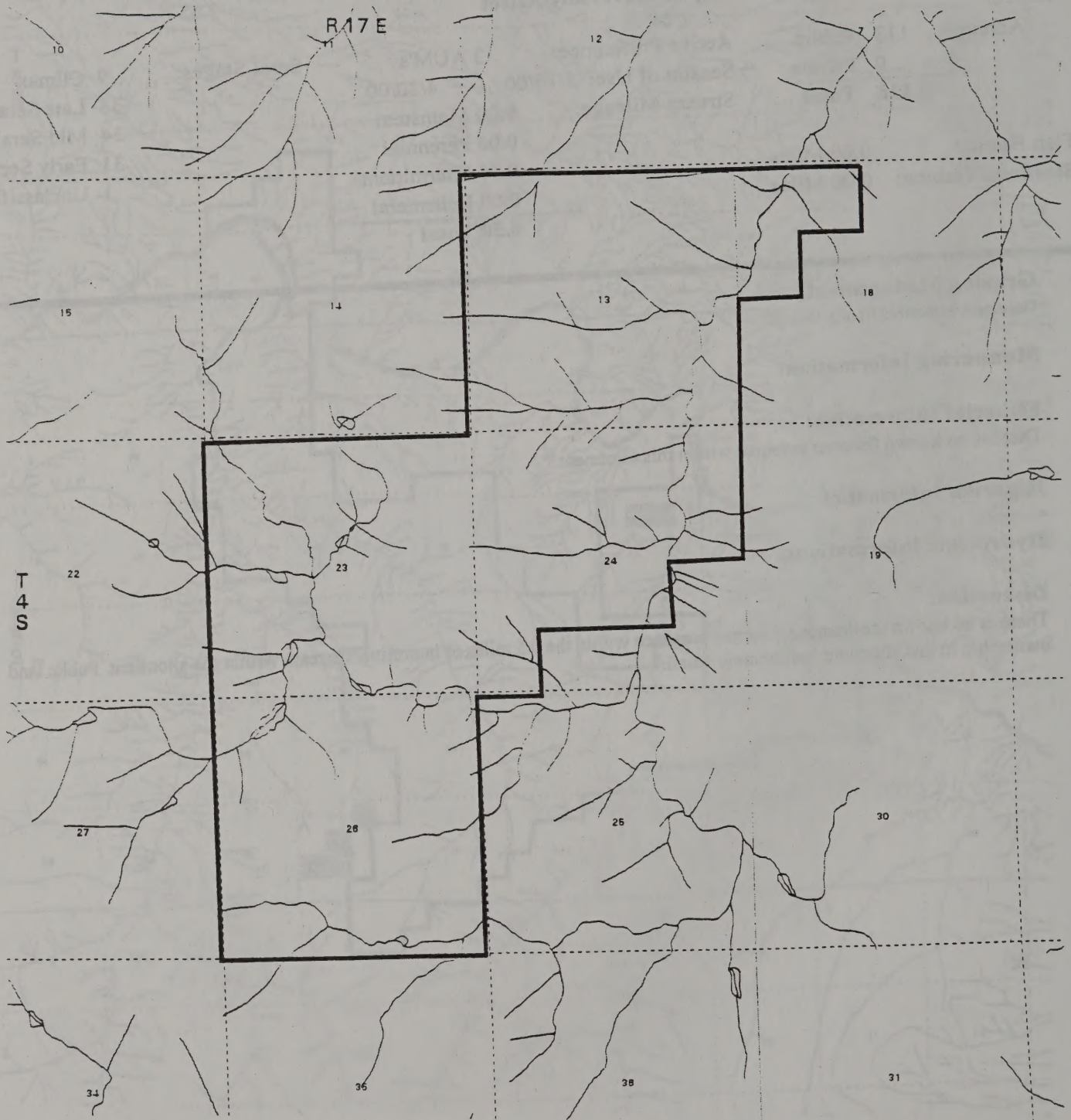
Riparian Information:

Hydrologic Information:

Discussion:

There is no known anadromous fisheries presence within the 0.5 miles of intermittent stream within the allotment. Public land ownership in this allotment is extremely small.

Justesen Allotment #02566



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



577 BYRDS POINT

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1.495	Public	Active Preference:	94 AUM's	Seral Stages:	0 Climax
4,640	Private	Season of Use:	4/16/00 - 12/15/00		0 Late Seral
6,135	Total	Stream Mileage:	0.75 Mainstem		0 Mid Seral
			0.75 Perennial		0 Early Seral
Fish Habitat:	0.75 Miles		0.00 Intermittent		0 Unclassified
Steelhead Habitat:	0.75 Miles		0.00 Ephemeral		
			0.75 Total		

Fish habitat is associated with the mainstem John Day river which provides migratory habitat for steelhead.

Grazing Management:

Grazing use is from April 16 to December 15, allotment is one big pasture with a small percentage of public land.

Monitoring Information:

There is one trend study plot within the allotment.

Fisheries Information:

The fisheries resource associated with this allotment is the mainstem John Day river which provides migratory habitat for steelhead.

Riparian Information:

Riparian communities are limited in this reach of the John Day River. In some locations the river washes against bedrock walls. In other places the river is lined with boulders. Willows grow from between the boulders, but there can never be a dense stand of wood vegetation in these areas. There are also sandy beaches which are kept practically devoid of riparian vegetation because of heavy recreation use. Other than willows there is little woody riparian vegetation. Except for the sand beaches, banks are stable. Although willows are present and may be increasing, the lack of a diverse riparian community indicates a low seral stage of development. The beaches were rated in poor condition and the boulder lined areas were in fair condition.

Hydrologic Information:

Discussion:

Public land is a small percentage of the overall allotment. Most of the public land parcels are upland in nature and have no effect on the river or riparian areas. A small segment of 0.75 miles of river is located on public land.

Byrds Point Allotment #02577



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



578 LOGAN

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 2.194	Public	Active Preference:	166 AUM's	Seral Stages:	421 Climax
13,806	Private	Season of Use: 9/15/00 - 12/31/00			774 Late Seral
<u>16,000</u>	Total	Stream Mileage:	0.00 Mainstem		0 Mid Seral
			0.00 Perennial		918 Early Seral
Fish Habitat:	0.00 Miles		2.80 Intermittent		81 Unclassified
Steelhead Habitat:	0.00 Miles		<u>0.00 Ephemeral</u>		
			2.80 Total		

Grazing Management:

The majority of this allotment is very steep ridges, cliffs and canyons with seasonal draws. Draws are forested generally with good understory vegetation.

Monitoring Information:

None.

Fisheries Information:

None, no potential. most seasonal draws drain directly into the JDR without flowing through any potential steelhead rearing or spawning habitat. The JDR is migratory corridor habitat only.

Riparian Information:

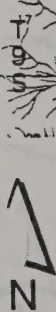
None, no potential.

Hydrologic Information:

Discussion:

There is no fisheries potential within allotment, most parcels are steep, cliff areas and are slated for disposal - 800 acres NOALE disposal. No potential - ephemeral or intermittent draws are high gradient with low flows.

ESB Design



USFS Land
CTWS Land
National Park
State Land



84 CATHERINE MAURER

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 14,683	Public	Active Preference:	526 AUM's	Seral Stages:	151 Climax
31,057	Private	Season of Use:	3/ 1/00 - 2/28/00		3,421 Late Seral
<u>45,740</u>	Total	Stream Mileage:	5.00 Mainstem		4,017 Mid Seral
			7.00 Perennial		6,550 Early Seral
Fish Habitat:	7.00 Miles		0.00 Intermittent		544 Unclassified
Steelhead Habitat:	7.00 Miles		0.00 Ephemeral		
			<u>7.00 Total</u>		

Fish habitat is associated with the mainstem John Day river which acts as a migration corridor for steelhead. Also within the allotment is two miles of Sorefoot creek, this creek has very low potential for any fish presence due to low flows.

Grazing Management:

Riparian pastures has been developed on the east and west sides of the river. Grazing within these pastures will be restricted to early spring use. All other public land associated with the river are small pieces within a much larger private pasture and are grazed year round.

Monitoring Information:

Four upland trend plots have been established within the allotment.

Fisheries Information:

The fisheries resources directly related to this allotment on public land are the mainstem John Day river which provides migratory habitat for steelhead, and Sorefoot Creek which is a very small perennial/intermittent tributary with little fish habitat, fish potential within this stream is very low.

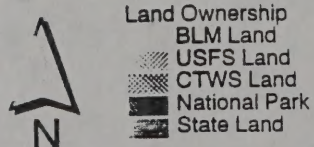
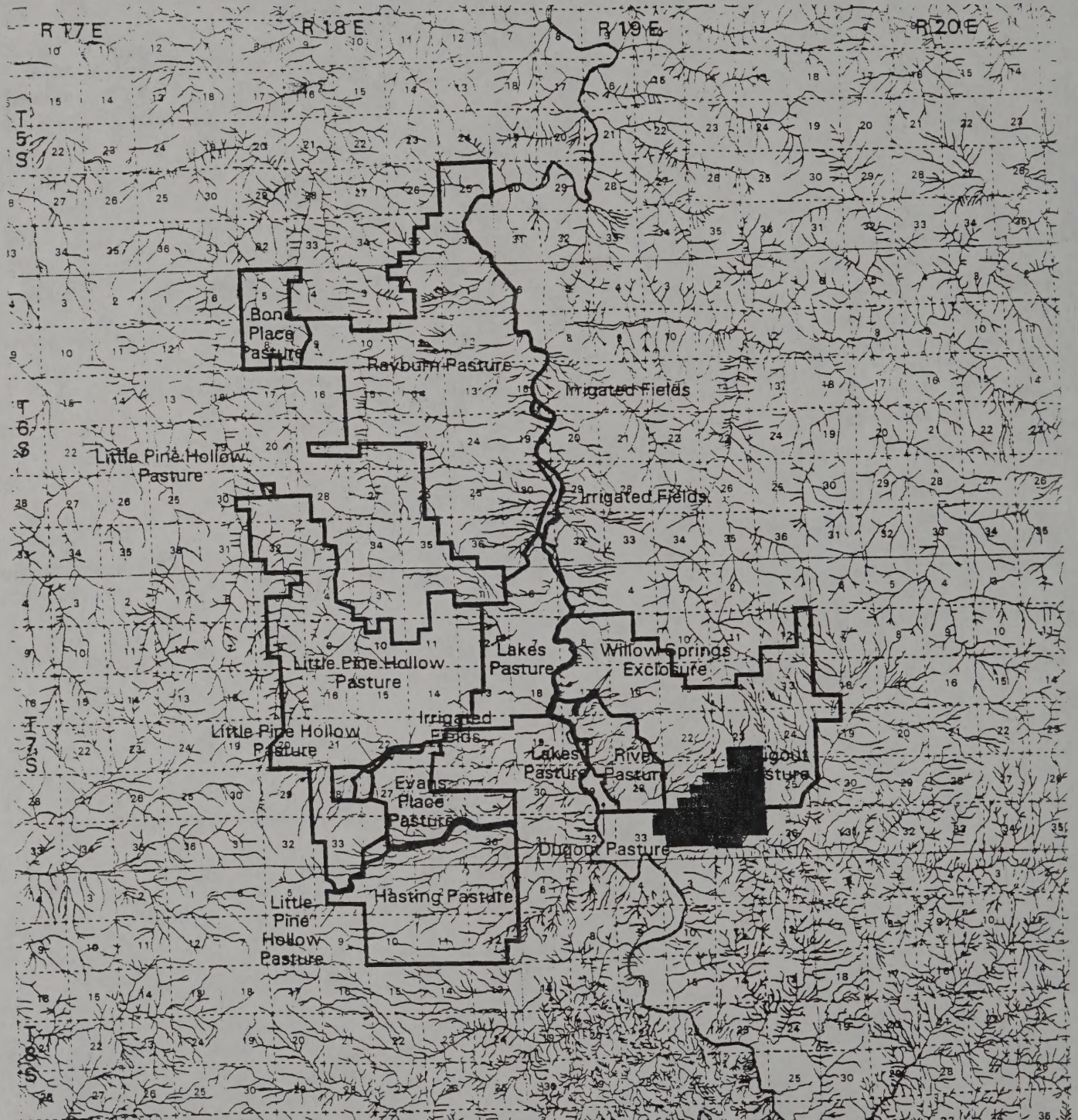
Riparian Information:

Hydrologic Information:

Discussion:

Grazing is done in a manner to work in the best interest of the resources where public ownership is involved. This allotment is being addressed in a large plan. Problems have been attacked one at a time with the initiation of a riparian pasture in 1996.

Catherine Maurer Allotment #02584



2587 CORRAL CANYON

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 2,101 Public	Active Preference: 78 AUM's	Seral Stages: 0 Climax
0 Private	Season of Use: 3/ 1/00 - 12/15/00	17 Late Seral
<u>2,101 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.25 Perennial	2,006 Early Seral
Fish Habitat: 0.00 Miles	0.00 Intermittent	78 Unclassified
Steelhead Habitat: 0.00 Miles	<u>0.00 Ephemeral</u>	
	0.25 Total	

Grazing Management:

The Wheeler County lands are divided into five pastures. Public land is only found within two of those pastures which are used during the summer months.

Monitoring Information:

Fisheries Information:

There is approximately 0.25 miles of Sorefoot Creek, which is a very small perennial/intermittent stream. No fish are known to be within this stream.

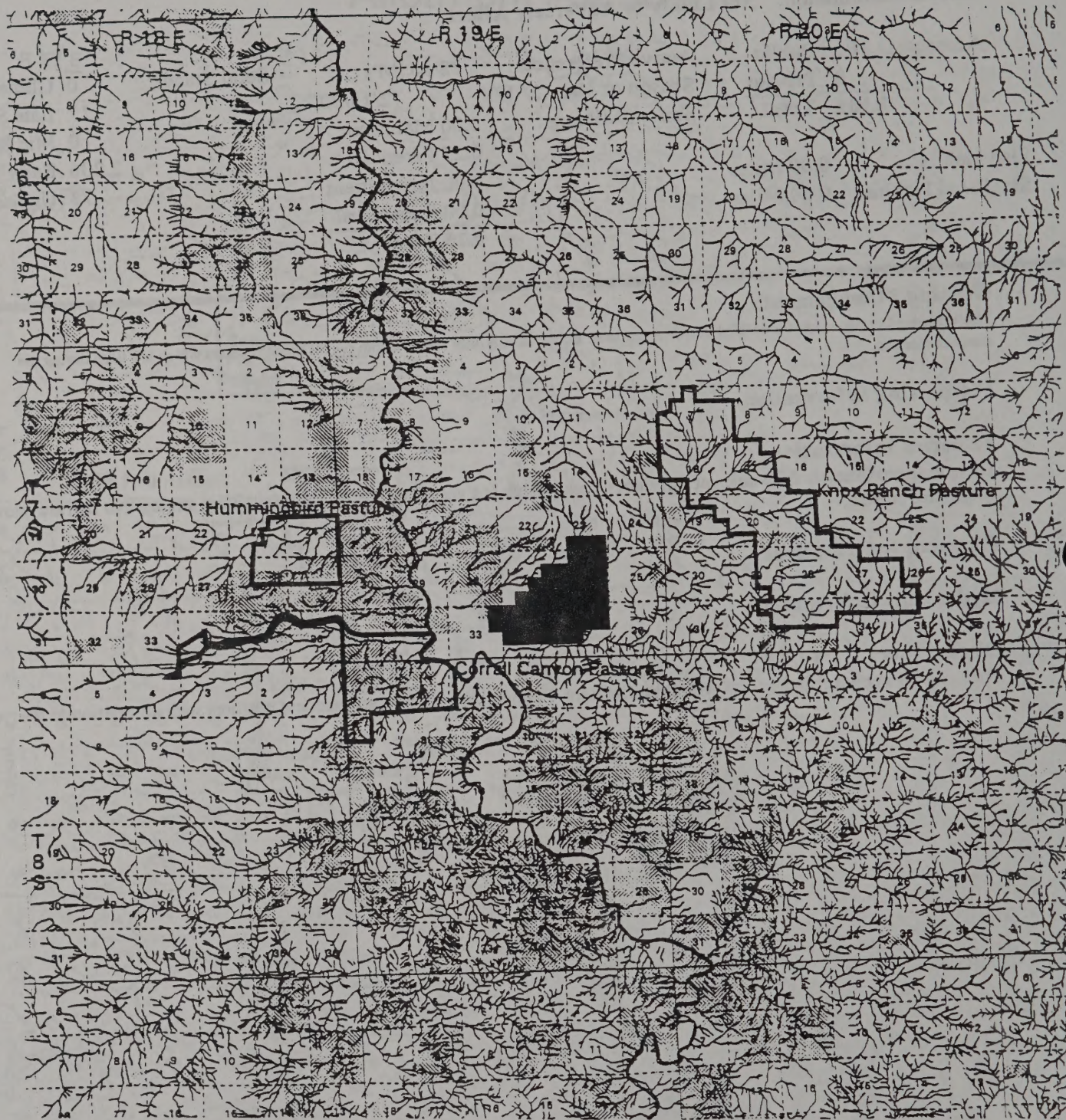
Riparian Information:

Hydrologic Information:

Discussion:

There are no known fish concerns with this allotment. Public lands are primarily upland pastures with no relation to the river.

Corral Canyon Allotment #02587



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



593 VERNE A. MOBLEY

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,240 Public	Active Preference: 133 AUM's	Seral Stages: 0 Climax
17,460 Private	Season of Use: 11/ 1/00 - 5/ 1/00	1,046 Late Seral
<u>18,700 Total</u>	Stream Mileage: 0.00 Mainstem	148 Mid Seral
	3.00 Perennial	0 Early Seral
Fish Habitat: 3.00 Miles	0.00 Intermittent	46 Unclassified
Steelhead Habitat: 3.00 Miles	0.00 Ephemeral	
	<u>3.00 Total</u>	

Steelhead habitat is spawning and rearing habitat within Pine Hollow Creek.

Grazing Management:

Cattle are run on this allotment from November through late April.

Monitoring Information:

There is one trend study plot within the allotment.

Fisheries Information:

The fisheries resource directly related to this allotment is the Pine Hollow watershed. Pine Hollow is an intermittent stream providing summer steelhead spawning during years of sufficient precipitation for adult passage and rearing in perennial stream reaches and isolated pools. Fisheries habitat is rated fair.

Riparian Information:

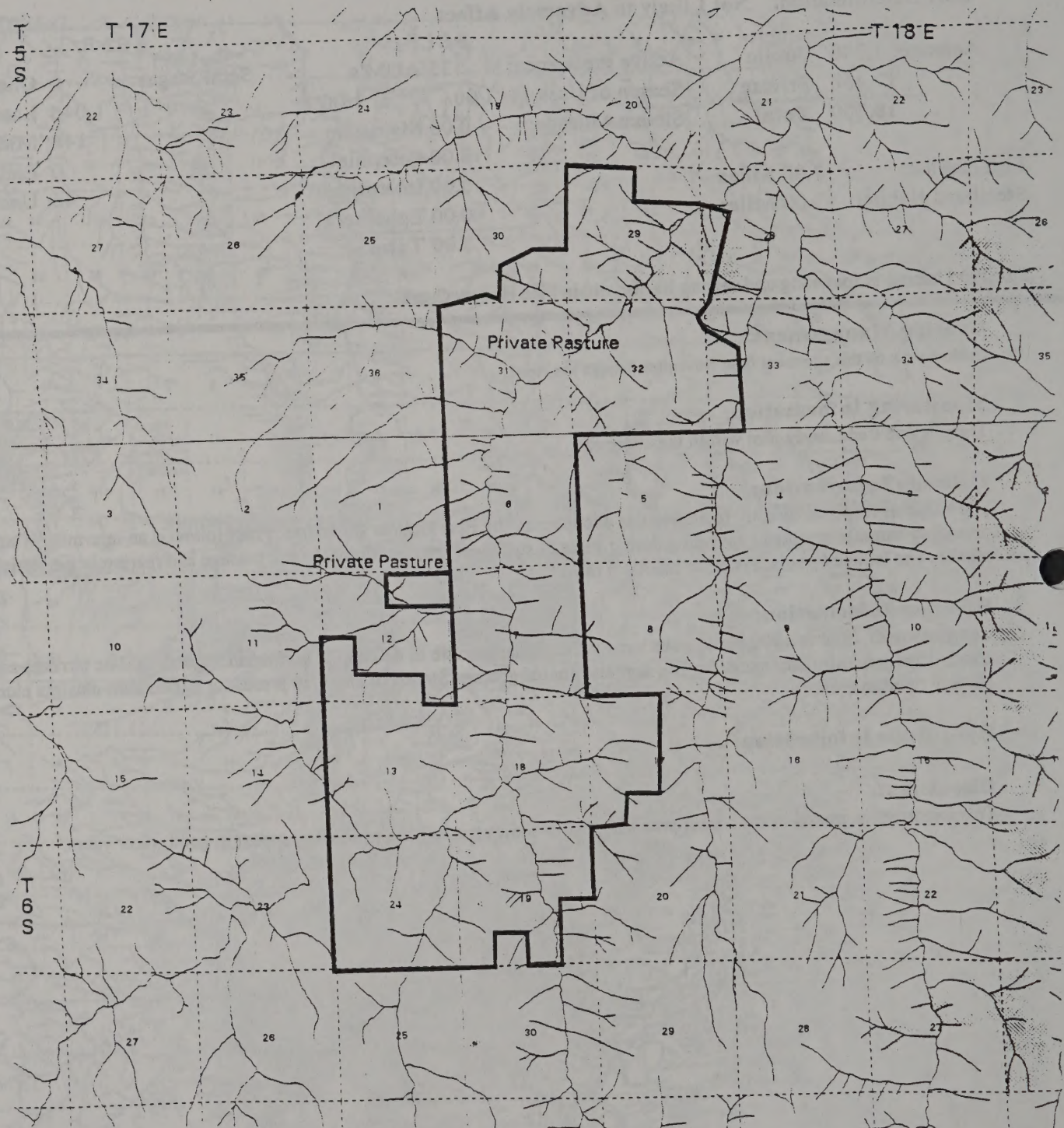
Comparison of 1980 to 1990 photo point survey data indicates little to no change in riparian vegetation. The terraces adjacent to the channel are generally dominated by Big sage and annual grasses. Stands of alder are present in intermittent clusters along the Pine Hollow riparian area.

Hydrologic Information:

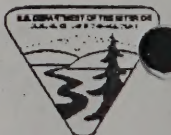
Discussion:

This allotment is grazed in the winter primarily, and is a known steelhead producing stream in good water years.

Verne A. Mobley Allotment #02593



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



2601 VICTOR B. NASH

Victor B. Nash
Allotment #02601

ESA Determination: Not Likely to Adversely Affect

Acreage: 160 Public	Active Preference: 14 AUM's	Seral Stages: 13 Climax
2,320 Private	Season of Use: 6/ 1/00 - 1/31/00	54 Late Seral
<u>2,480 Total</u>	Stream Mileage: 0.00 Mainstem	48 Mid Seral
	0.00 Perennial	44 Early Seral
Fish Habitat: 0.00 Miles	0.60 Intermittent	1 Unclassified
Steelhead Habitat: 0.00 Miles	0.60 Ephemeral	
	<u>1.20 Total</u>	

Grazing Management:

Good grass/forage cover and good forest overstory along seasonal draw. Season of use is 6/1 to 1/31. Public acreage is upland area with one ephemeral draw.

Monitoring Information:

None.

Fisheries Information:

None.

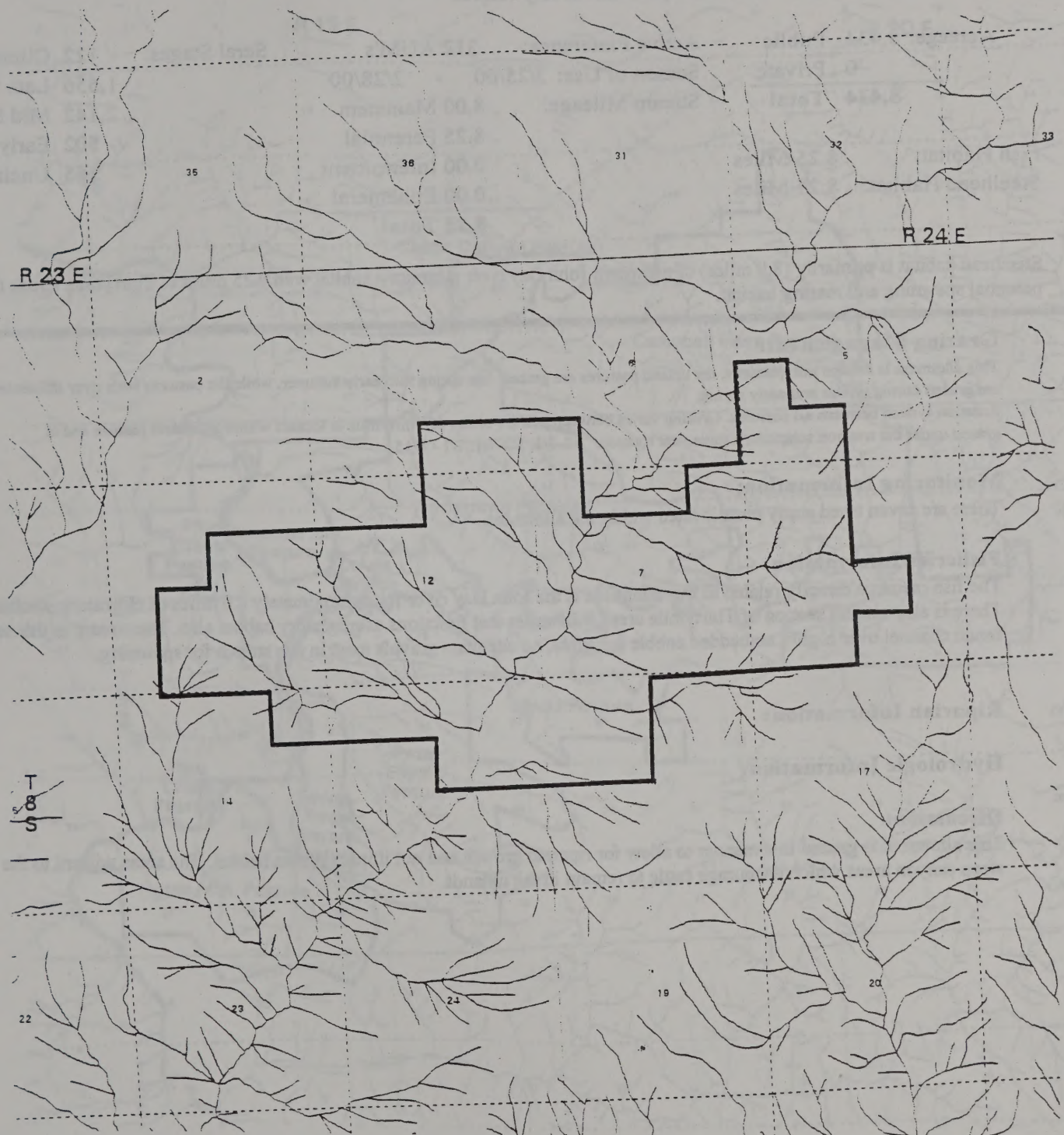
Riparian Information:

Hydrologic Information:

Discussion:

NOALE disposal. No potential habitat, upland parcel with ephemeral draws.

Victor B. Nash Allotment #02601



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



2608 RATTRAY

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 8,434	Public	Active Preference:	312 AUM's	Seral Stages:	122 Climax
	0 Private	Season of Use:	3/25/00 - 2/28/00		1,556 Late Seral
<u>8,434</u>	Total	Stream Mileage:	8.00 Mainstem		2,142 Mid Seral
			8.25 Perennial		502 Early Seral
Fish Habitat:	8.25 Miles		0.00 Intermittent		165 Unclassified
Steelhead Habitat:	8.25 Miles		0.00 Ephemeral		
			<u>8.25</u>		Total

Steelhead habitat is primarily (8.0 miles) of mainstem John Day river migratory habitat with 0.25 miles of Thirtymile Creek that is potential spawning and rearing habitat.

Grazing Management:

This allotment is broken into pastures, the upland pastures are grazed late spring into early summer, while the pastures with river influence are grazed during winter and early spring.

Rotation system between all pastures. Grazing varies between years. Portion of Thirtymile is located within an upland pasture and is grazed under the rotation schedule, a three year rotation, 3/1-5/1, 5/2-7/1, 7/1 - 8/15.

Monitoring Information:

There are seven tined study plots located within the allotment.

Fisheries Information:

The fish resource directly related to this allotment is the John Day river for approximately 8.0 miles of migratory steelhead habitat. There is also a small section of Thirtymile creek 0.25 miles that functions as migratory habitat also. The stream in this section is a broad channel over highly embedded cobble substrate, no adequate gravels exist in this stretch for spawning.

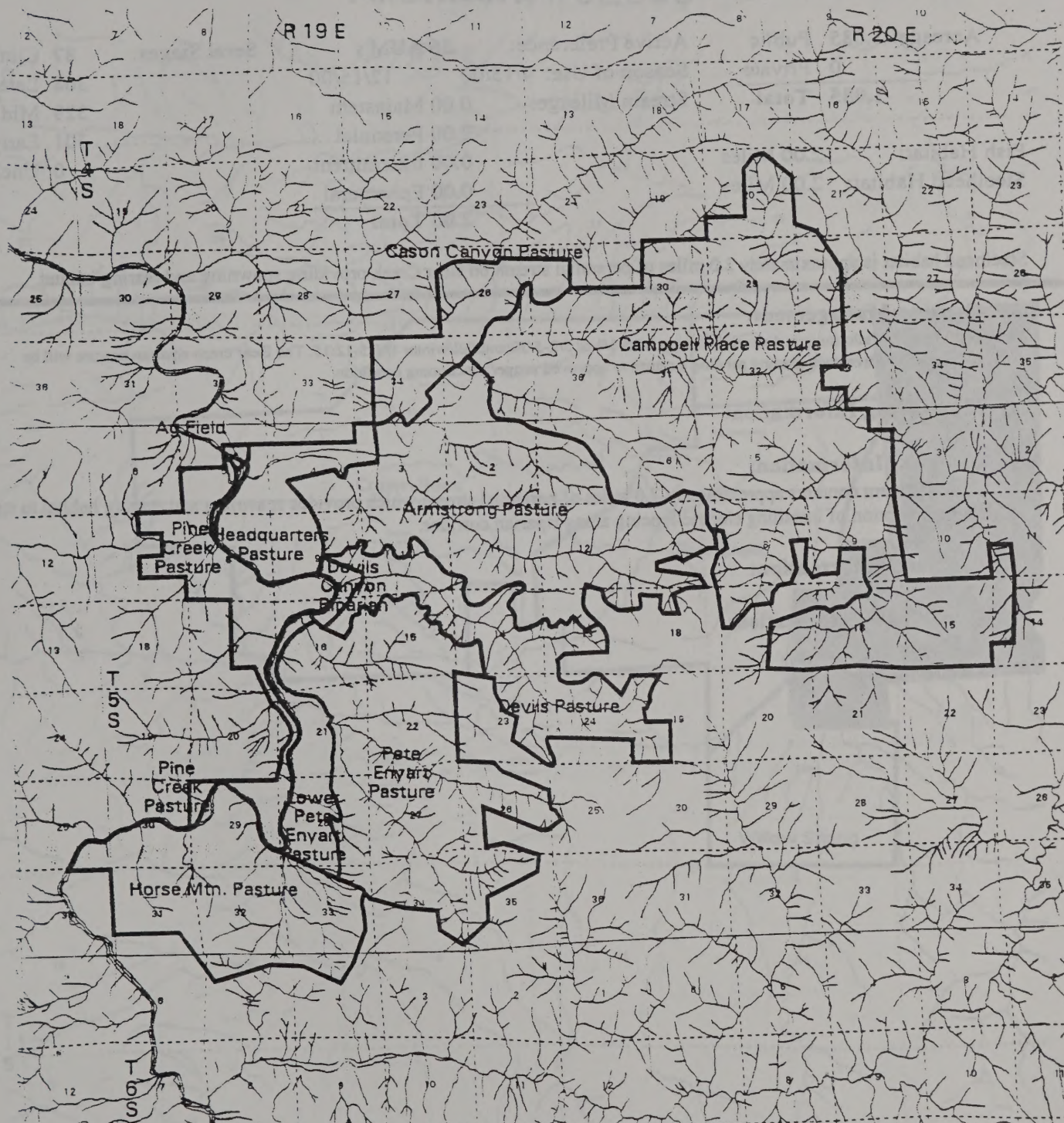
Riparian Information:

Hydrologic Information:

Discussion:

This allotment is grazed in a manner to allow for riparian growth and not impact stream habitat. The areas adjacent to the river are steep canyon areas which encourage cattle to remain in the uplands.

Rattray Allotment #02608



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



2609 CROWN ROCK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,085 Public	Active Preference: 56 AUM's	Seral Stages: 87 Climax
0 Private	Season of Use: 4/15/00 - 12/15/00	368 Late Seral
<u>1,085 Total</u>	Stream Mileage: 0.00 Mainstem	329 Mid Seral
	2.00 Perennial	301 Early Seral
Fish Habitat: 2.00 Miles	0.00 Intermittent	0 Unclassified
Steelhead Habitat: 2.00 Miles	0.00 Ephemeral	
	<u>2.00 Total</u>	

Steelhead habitat is approximately 2.0 miles of perennial stream on Bear Creek providing spawning and rearing habitat.

Grazing Management:

Grazing on the allotment is done early spring 4/15-5/1 or 5/2-5/30 and fall/winter 10/15-12/15. The Bear creek riparian pasture will be excluded from livestock grazing pending a return to approved proper functioning condition.

Monitoring Information:

Fisheries Information:

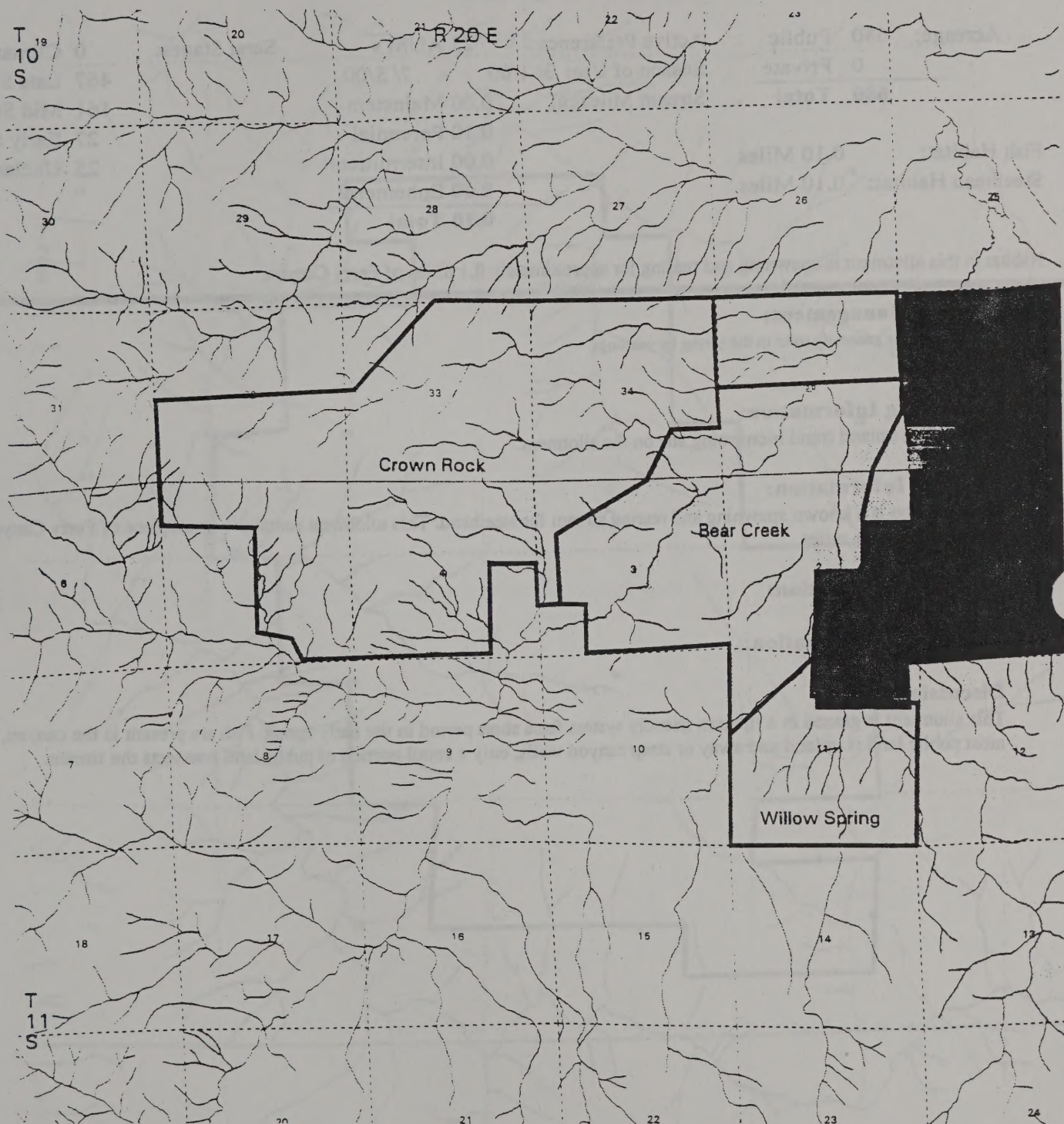
This allotment contains approximately 2.0 miles of perennial stream which provides spawning and rearing habitat to steelhead. Pursuing option of installing electric fencing along riparian corridor.

Riparian Information:

Hydrologic Information:

Discussion:

Crown Rock Allotment #02666 2609



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



2611 VAN RIETMANN

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 680 Public	Active Preference: 25 AUM's	Seral Stages: 0 Climax
0 Private	Season of Use: 3/ 1/00 - 7/ 5/00	467 Late Seral
<u>680 Total</u>	Stream Mileage: 0.00 Mainstem	161 Mid Seral
	0.10 Perennial	27 Early Seral
Fish Habitat: 0.10 Miles	0.00 Intermittent	25 Unclassified
Steelhead Habitat: 0.10 Miles	<u>0.00 Ephemeral</u>	
	0.10 Total	

Habitat in this allotment is spawning and rearing for approximately 0.1 miles of Ferry Canyon.

Grazing Management:

The allotment is generally used in the spring by yearlings.

Monitoring Information:

There is one upland trend monitoring site on the allotment.

Fisheries Information:

Ferry Canyon is a known spawning and rearing stream for steelhead. This allotment contains a small piece of Ferry Canyon approximately 0.1 miles.

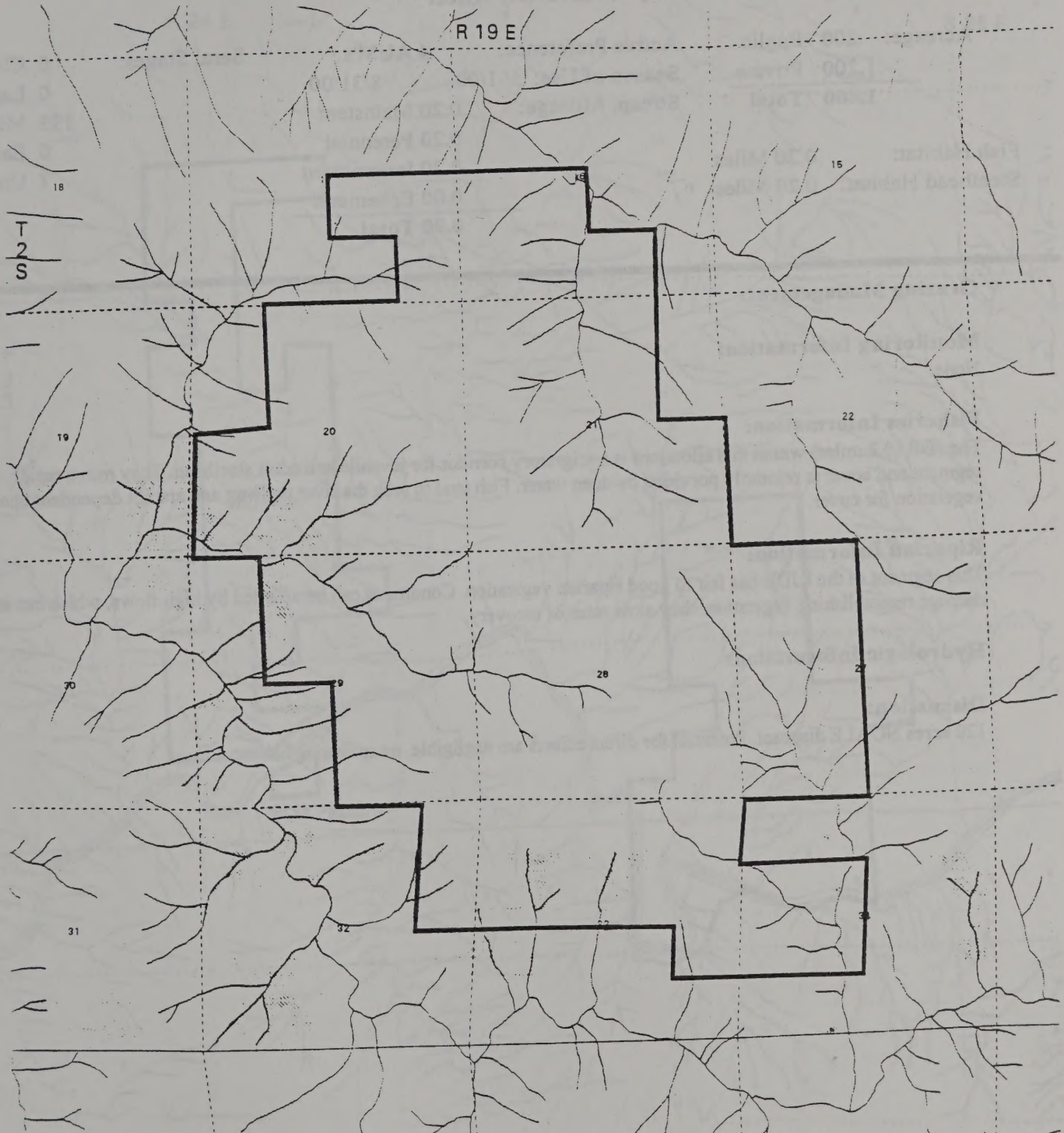
Riparian Information:

Hydrologic Information:

Discussion:

This allotment is grazed in a riparian friendly system for a short period in the early spring. Fish are present in the canyon, however most public land is upland and away or steep canyon walls, only a small portion of public land intersects the stream.

Van Rietmann Allotment #02611



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



2613 FRANK R. ROBINSON

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 200 Public	Active Preference: 4 AUM's	Seral Stages: 0 Climax
1,200 Private	Season of Use: 5/ 1/00 - 8/31/00	0 Late Seral
<u>1,400 Total</u>	Stream Mileage: 0.20 Mainstem	193 Mid Seral
	0.20 Perennial	0 Early Seral
Fish Habitat: 0.20 Miles	0.70 Intermittent	7 Unclassified
Steelhead Habitat: 0.20 Miles	0.00 Ephemeral	
	<u>0.90 Total</u>	

Grazing Management:

Monitoring Information:

None.

Fisheries Information:

The JDR (0.2 miles) within this allotment is a migratory corridor for juvenile and adult steelhead. They move rapidly through this segment and cover is primarily provided by deep water. Fish tend to seek the river thalweg and are not dependent upon river margin vegetation for cover.

Riparian Information:

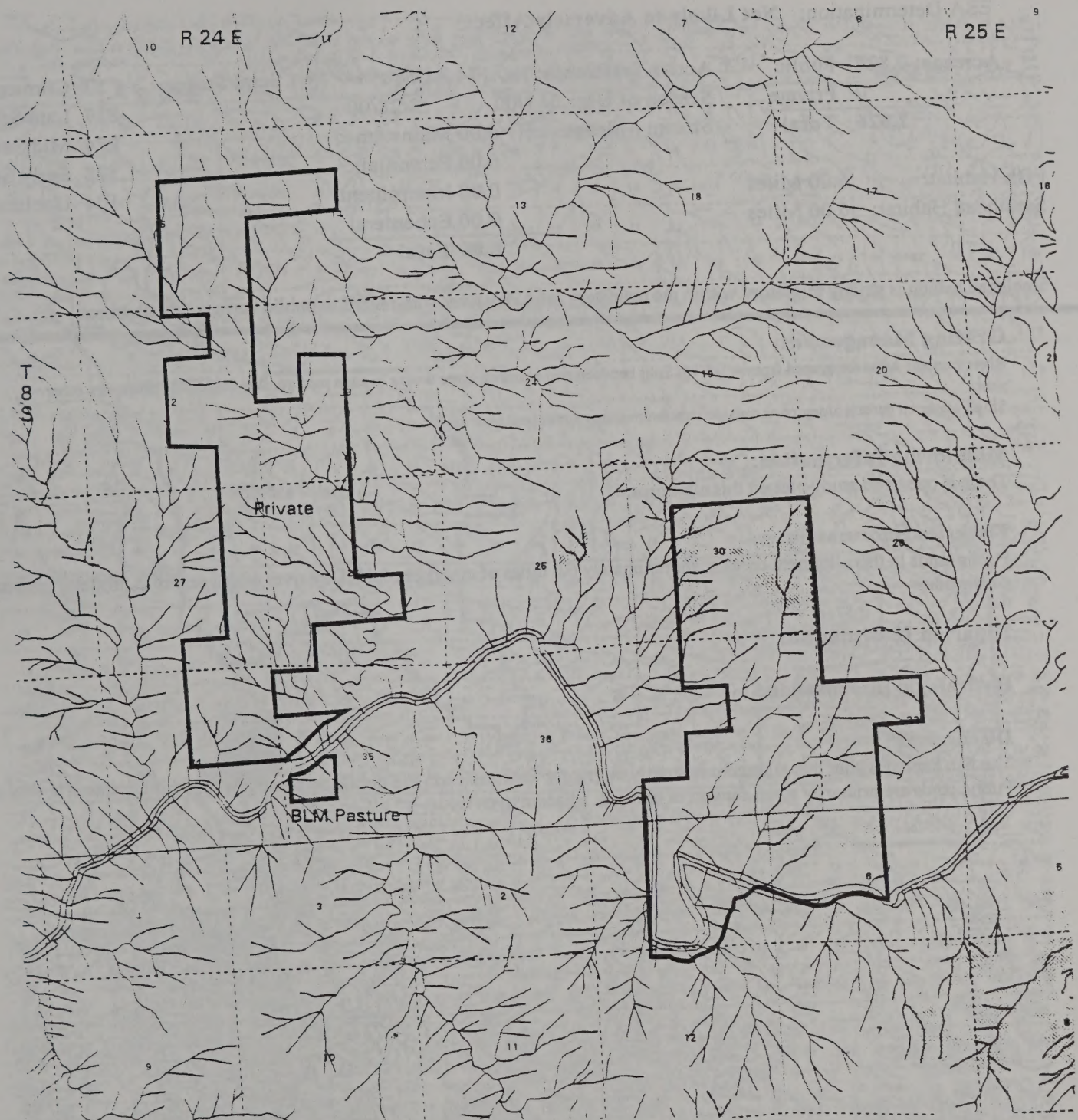
This segment of the LJDR has fair to good riparian vegetation. Conditions can be affected by high flows, which can erode and damage reestablishing vegetation, they slow rates of recovery.

Hydrologic Information:

Discussion:

120 acres NOALE disposal. Potential for direct effects are negligible, no spawning habitat.

Frank R. Robinson Allotment #02613



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



23 STEIWER RANCHES

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 2,826 Public	Active Preference: 174 AUM's	Seral Stages:	53 Climax
0 Private	Season of Use: 3/ 1/00 - 2/28/00		817 Late Seral
<u>2,826 Total</u>	Stream Mileage: 6.00 Mainstem		274 Mid Seral
	6.00 Perennial		1,578 Early Seral
Fish Habitat: 6.00 Miles	0.00 Intermittent		104 Unclassified
Steelhead Habitat: 6.00 Miles	0.00 Ephemeral		
	<u>6.00 Total</u>		

Steelhead habitat is strictly migratory within the mainstem John Day river with regard to public lands in this allotment.

Grazing Management:

River frontage areas are grazed from 4/1-5/15. Split between two pastures, three weeks in each pasture. flip-flop on/off date every other year.

Small scattered parcels along river outside riparian pastures authorized year long.

Monitoring Information:

There is one trend study plot on this allotment.

Fisheries Information:

Public lands in this allotment contain approximately 6.0 miles of mainstem John Day river which serves as migratory habitat steelhead.

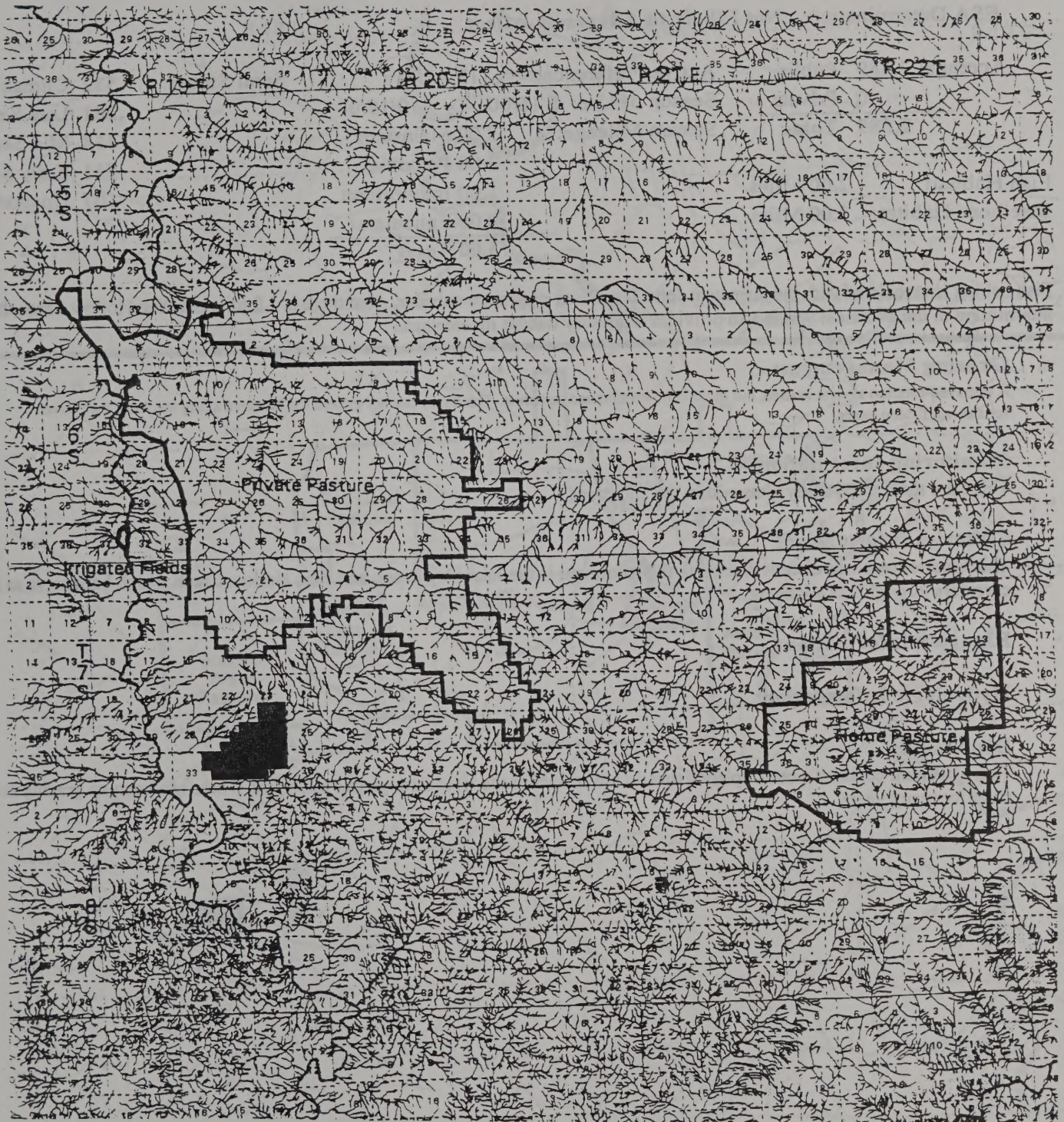
Riparian Information:

Hydrologic Information:

Discussion:

The fish habitat within this allotment is strictly migratory for steelhead. The public ownership within this allotment is very small. Public lands are primarily steep canyon or uplands, adjacent to river.

Steiwer Ranches Allotment #02623



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



29 TATUM

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 2,889 Public	Active Preference: 113 AUM's	Seral Stages: 532 Climax
0 Private	Season of Use: 5/16/00 - 10/19/00	1,281 Late Seral
<u>2,889 Total</u>	Stream Mileage: 2.00 Mainstem	458 Mid Seral
	2.00 Perennial	511 Early Seral
Fish Habitat: 2.00 Miles	1.00 Intermittent	107 Unclassified
Steelhead Habitat: 3.00 Miles	0.00 Ephemeral	
	<u>3.00 Total</u>	

Fish habitat is associated with the mainstem John Day River migratory corridor. Also there is 1.0 miles of Pine Hollow Creek that is intermittent in the allotment which also provides migratory habitat for steelhead.

Grazing Management:

A deferred-rotation system is used, but there is no established schedule. The lessee has not grazed the pastures along the John Day River for the last fifteen years.

Monitoring Information:

There are three trend study plots within the allotment.

Fisheries Information:

The fisheries resource directly related to this allotment is the John Day River, and Pine Hollow Creek which both serve as migratory corridors through this allotment.

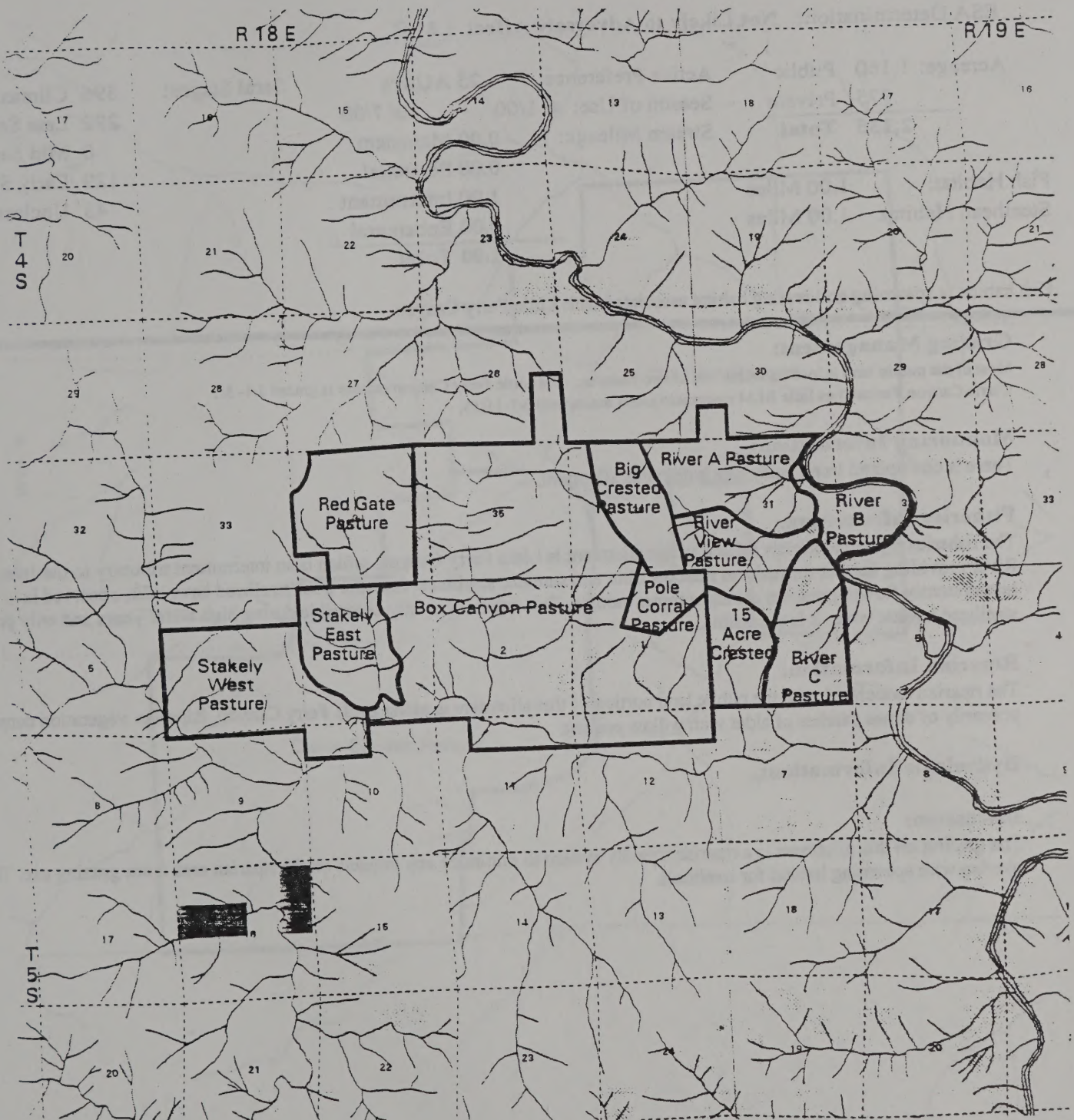
Riparian Information:

Hydrologic Information:

Discussion:

This allotment contains mostly uplands that do not influence the river through this allotment. There has been no grazing along the river for many years.

Tatum Allotment #02629



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



31 DIPPING VAT

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1.160 Public	Active Preference: 25 AUM's	Seral Stages: 696 Climax
975 Private	Season of Use: 4/ 1/00 - 10/ 7/00	292 Late Seral
<u>2,135 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.00 Perennial	129 Early Seral
Fish Habitat: 1.00 Miles	1.00 Intermittent	43 Unclassified
Steelhead Habitat: 1.00 Miles	0.00 Ephemeral	
	<u>1.00 Total</u>	

Fish habitat is spawning and rearing habitat associated with Little Ferry Canyon.

Grazing Management:

Most of the public land is located within one of two pastures. The Little Ferry Canyon pasture is grazed 3/1- 5/1. Currie Canyon Pasture has little BLM ownership and is authorized 3/1-11/15.

Monitoring Information:

There is one upland trend study plot within this allotment.

Fisheries Information:

The fisheries resource directly related to this allotment is Little Ferry Canyon, which is an intermittent tributary to the John D. River providing habitat for resident rainbow trout and summer steelhead. Juvenile trout/steelhead have been observed in intermittently flowing reaches during summer months. This tributary is only accessible during high water years and only provides steelhead habitat when it is accessible.

Riparian Information:

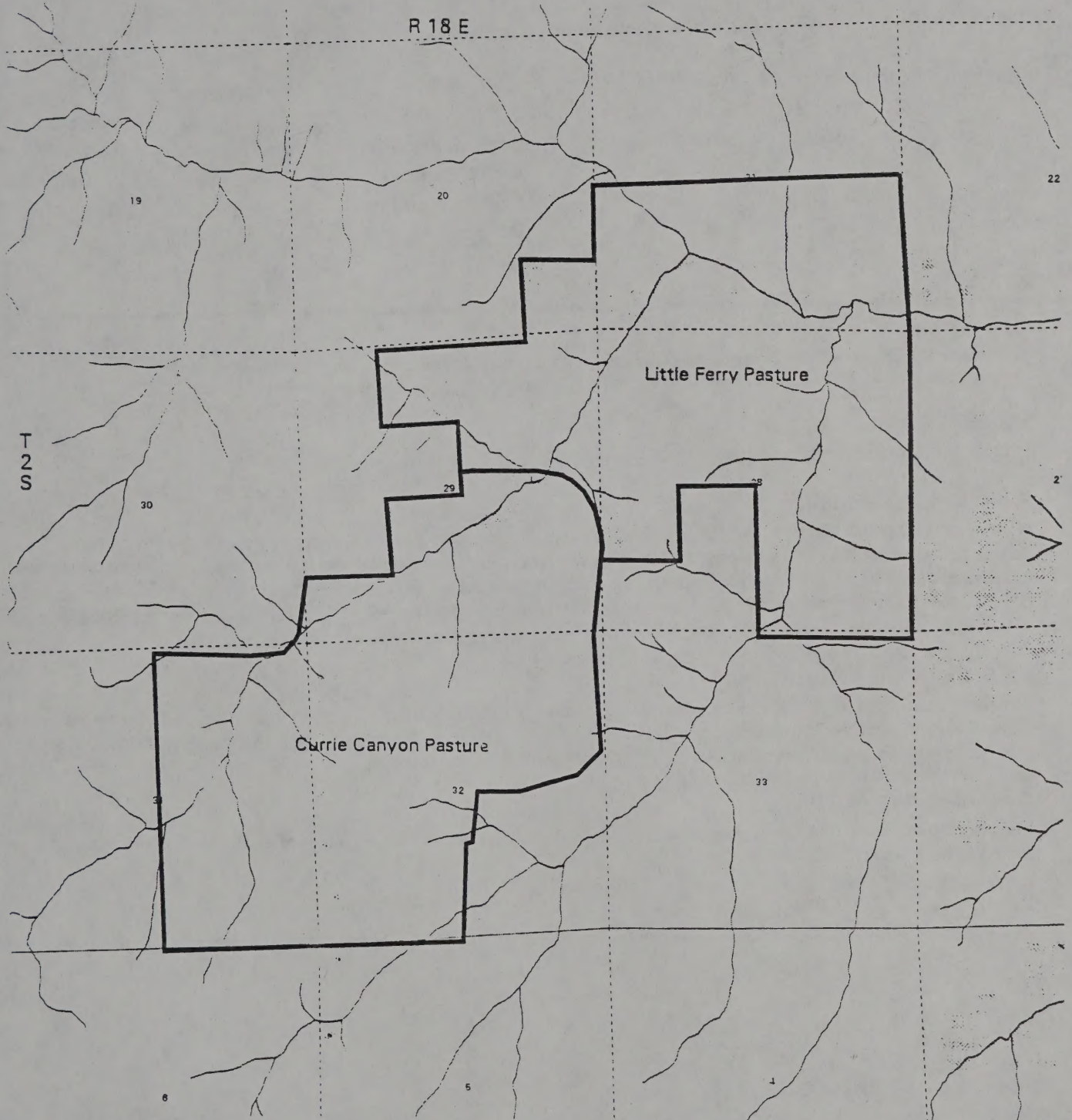
The riparian associated with the public land portion of this allotment is along Little Ferry Canyon. Riparian vegetation consists primarily of dense patches of alder with willow present.

Hydrologic Information:

Discussion:

The grazing on this allotment is a riparian friendly system to minimize any impacts on the riparian area from grazing use. There is overlap with spawning habitat for steelhead.

Dipping Vat Allotment #02631



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



9 TUBB CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 429 Public	Active Preference: 50 AUM's	Seral Stages: 34 Climax
5,371 Private	Season of Use: 5/15/00 - 10/30/00	145 Late Seral
<u>5,800 Total</u>	Stream Mileage: 0.00 Mainstem	130 Mid Seral
	0.60 Perennial	119 Early Seral
Fish Habitat: 0.60 Miles	0.60 Intermittent	1 Unclassified
Steelhead Habitat: 0.60 Miles	<u>0.00 Ephemeral</u>	
	1.20 Total	

Grazing Management:

Allotment was not grazed in 1998. Dominant upland vegetation was bluebunch wheatgrass. Idaho fescue and sagebrush. Grazing occurs 5/15-6/30 on T11S, R24E sec 32 SE1/4SW1/4, SW1/4SE1/4 (Willow and Fopiano Creeks)

Monitoring Information:

1980 physical stream survey, riparian habitat inventory.

Fisheries Information:

Willow creek provides marginal habitat for steelhead trout. Lack of large structural material, little escape cover, lack of spawning gravel, little pool habitat (7%) and inhospitable summer water temperatures contribute to a poor rating. No trout were observed this segment in 1980 survey. Upstream management practices have the largest impact in this condition, given this segment is near the stream's mouth, stream gradient was 2.5%, stream shade was 25%. Fopiano creek (0.2 miles) has fair/poor fish habitat conditions, due to lack of escape cover, pools and spawning gravel, and likely high summer water temperatures.

Riparian Information:

Riparian condition of Willow Creek (0.4 miles) was rated as fair in 1980. rush-sedge (87%) and alder (13%) were the dominant vegetation communities. The riparian zone of Fopiano Creek is dominated by grass/sedge communities with isolated segments of alder/willow/sagebrush communities. About 90% of the riparian zone was vegetated.

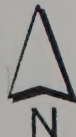
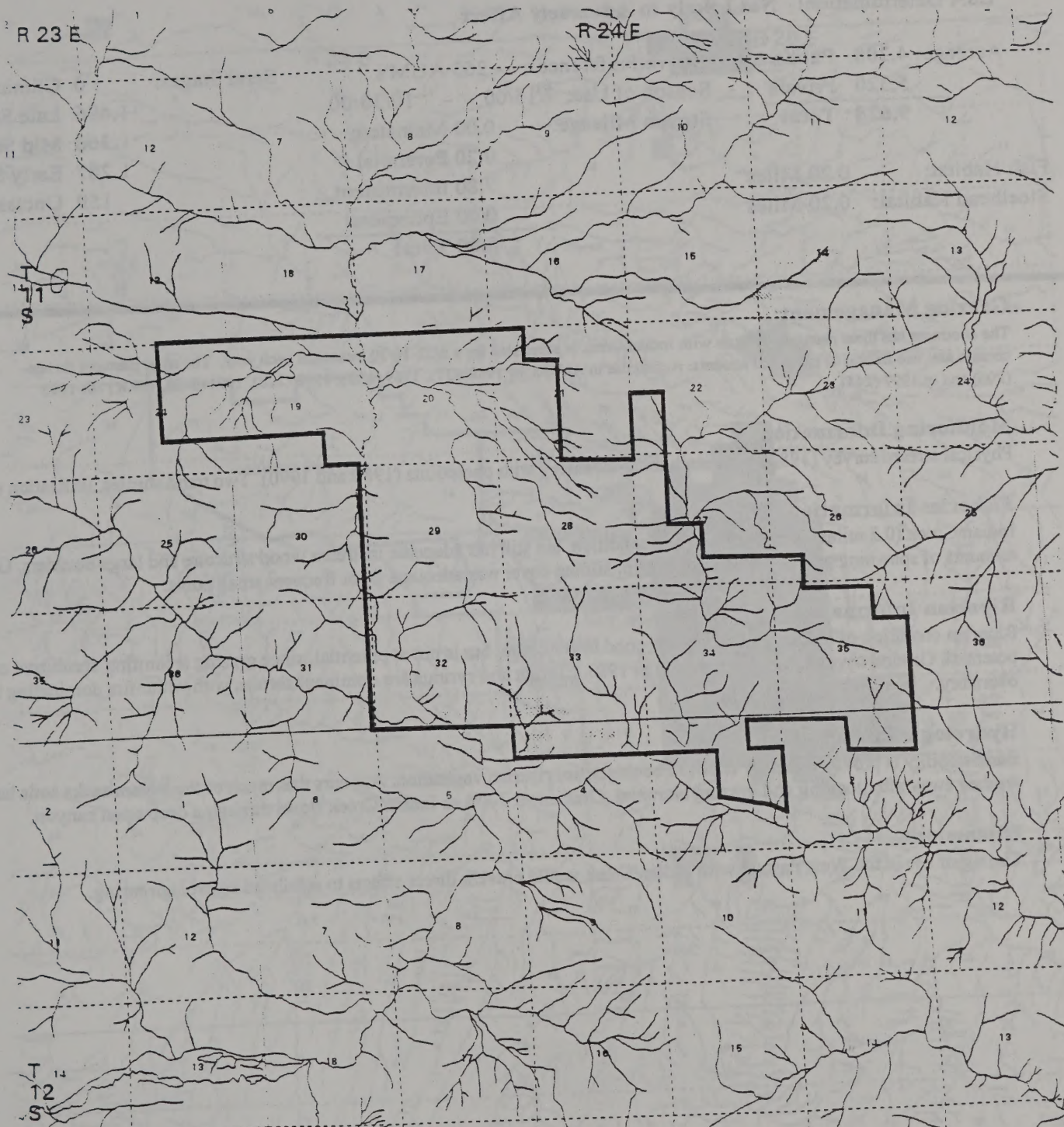
Hydrologic Information:

Channel stability in Willow Creek was good in 1980 survey. most documented segments of damaged streambanks was attributed to cattle and high water.

Discussion:

Potential for fish low due to poor habitat condition. The lower 0.6 miles is perennial but lacks seasonal flows to support fish.

Tubb Creek Allotment #02639



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



12 LILLIAN C. MASCALL

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 4,308 Public	Active Preference: 265 AUM's	Seral Stages: 0 Climax
5,320 Private	Season of Use: 7/15/00 - 10/30/00	1,496 Late Seral
<u>9,628 Total</u>	Stream Mileage: 0.00 Mainstem	1,366 Mid Seral
	0.20 Perennial	1,287 Early Seral
Fish Habitat: 0.20 Miles	7.80 Intermittent	159 Unclassified
Steelhead Habitat: 0.20 Miles	0.00 Ephemeral	
	<u>8.00 Total</u>	

Grazing Management:

The allotment has three pastures. Pasture with Indian Creek is scheduled for a 8/22-10/30 treatment each year. The other pastures do not contain any fish habitat or perennial streams. Actual use in AUM's for 1988(637), 1989 (155), 1990 (228), 1991 (363), 1993(170) 1995 (206) and in 1997 (244).

Monitoring Information:

Physical stream survey (1980), riparian habitat inventory with photpoints (1980 and 1990). Two trend studies, utilization data.

Fisheries Information:

Indian Creek (0.2 miles) is in degraded fair condition, but still has adequate instream wood structure and large boulders. Good amounts of spawning gravel were in the stream. Hiding cover was adequate from frequent small pools.

Riparian Information:

Riparian condition of Indian Creek is fair to good in condition, but is not at potential, since grazing is limiting shrub/tree community potential. Ground cover appeared better than in 1980. Currant and syringa are dominant shrubs, with white firs dominating the overstory.

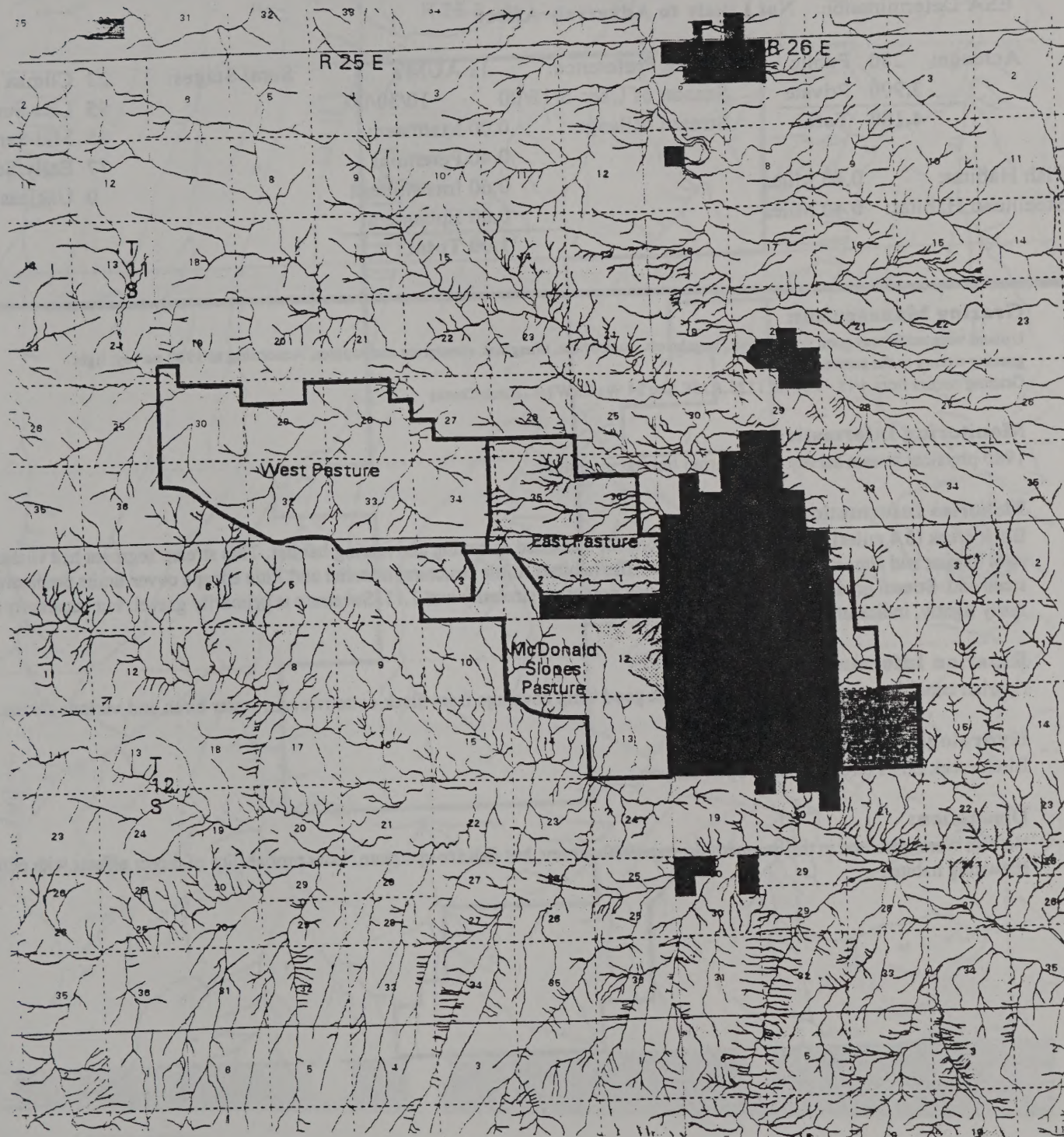
Hydrologic Information:

Bank stability is provided mainly exposed boulders, not riparian vegetation. Appears that much of the streambanks soils have been washed away after logging and grazing activities. Gradient is 3-8% as Indian Creek flows through a deep open canyon.

Discussion:

Timing of use in the West Pasture with Indian Creek would prevent direct effects to steelhead spawning/rearing.

Lillian C. Mascall Allotment #02642



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



10 RATTLESNAKE CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 280 Public	Active Preference: 11 AUM's	Seral Stages: 23 Climax
3,900 Private	Season of Use: 5/15/00 - 10/30/00	95 Late Seral
<u>4,180 Total</u>	Stream Mileage: 0.00 Mainstem	85 Mid Seral
	0.40 Perennial	77 Early Seral
Fish Habitat: 0.40 Miles	0.60 Intermittent	0 Unclassified
Steelhead Habitat: 0.40 Miles	0.00 Ephemeral	
	<u>1.00 Total</u>	

Grazing Management:

Upland vegetation was good with juniper, sagebrush, buckwheat, bluegrass, cheatgrass and lupines. According to 1980 survey, light grazing occurs in the summer.

Grazing occurs from 4/15 - 5/31 on T12S.R25E Sec 34 W1/2SW1/4 (Birch Creek)

Monitoring Information:

1980 physical stream survey and riparian habitat inventory.

Fisheries Information:

Birch creek (0.4 miles) had marginal conditions for steelhead spawning and rearing habitat. This stream segment had virtually no pool habitat and almost continuous rapid and riffle habitats. Little structural material and little escape cover limits productivity of steelhead. Stream gradient is 3.7%. Low erosion potential, sinuosity was 1.13. Substrate is primarily gravel, but apparently embedded fairly tightly, indicating upstream sediment problems.

Riparian Information:

riparian condition was rated as excellent with good bank coverage from black cottonwoods, water birch and various shrubs.

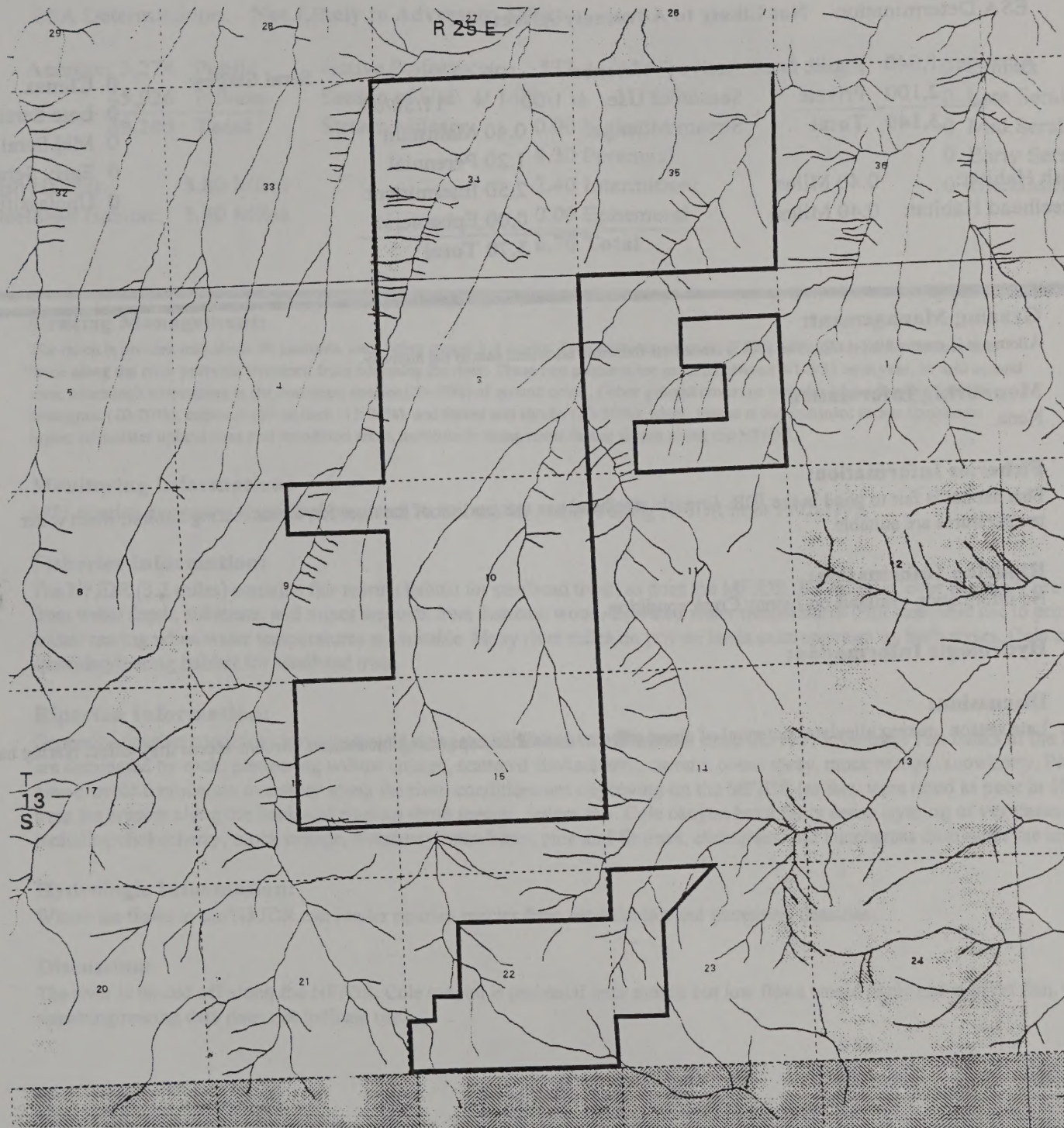
Hydrologic Information:

Birch creek flows through a deep open canyon.

Discussion:

No fish were observed in this segment during 1980 survey, but fish are upstream. Low probability of direct effects with poor spawning habitat.

Rattlesnake Creek Allotment #02660



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



001 JOHNNY CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,040	Public	Active Preference:	196 AUM's	Seral Stages:	0 Climax
2,100	Private	Season of Use: 4/ 1/00	- 11/30/00		0 Late Seral
3,140	Total	Stream Mileage:	0.40 Mainstem		0 Mid Seral
			1.20 Perennial		0 Early Seral
Fish Habitat:	0.40 Miles		2.50 Intermittent		0 Unclassified
Steelhead Habitat:	0.40 Miles		0.00 Ephemeral		
			3.70 Total		

Grazing Management:

Allotment is grazed 10/1-11/30. The JDR is fenced off from this allotment east of the highway.

Monitoring Information:

None.

Fisheries Information:

Fish habitat is fair to good in the JDR. Juvenile steelhead use this portion of the river for winter rearing habitat, when water temperatures are suitable.

Riparian Information:

No information available on Johnny Creek condition.

Hydrologic Information:

Discussion:

Late season grazing alleviates potential of direct effects to steelhead spawning/incubation. Stream access may effect rearing habitat.

1983 SLICKEAR MT.

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 3,274 Public	Active Preference: 537 AUM's	Seral Stages:	0 Climax
45,926 Private	Season of Use: 4/ 1/00 - 11/ 1/00		0 Late Seral
49,200 Total	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	4.30 Perennial		0 Early Seral
Fish Habitat: 3.80 Miles	2.40 Intermittent		0 Unclassified
Steelhead Habitat: 3.80 Miles	0.00 Ephemeral		
	6.70 Total		

Grazing Management:

The ranch is divided into about 40 pastures, each being grazed 3-4 weeks. Two pastures contain NFJDR frontage on public lands, but a fence along the river prevents livestock from accessing the river. These two pastures are grazed between 4/1-5/31 each year. In arid upland sites, bluebunch wheatgrass is the dominant species (20-40%) of ground cover. Other ground coverage includes Idaho fescue (1-20%), cheatgrass (10-20%), exposed soil or rock (15-25%), and forbes and shrubs (20-30%). Idaho fescue is the dominant forage species on higher or moister upland sites and woodland areas, particularly along north facing slopes along the NFJDR.

Monitoring Information:

1981 riparian inventory, riparian photopoints. Actual use for pastures along NFJDR from 1992-1995.

Fisheries Information:

The NFJDR (3.2 miles) contains fair rearing habitat for steelhead trout, as does the MFJDR (0.3 miles). Cover is mainly provided from water depth, substrate, and minor amounts from instream wood. Elevated water temperatures limit steelhead use to primarily winter rearing when water temperatures are suitable. Many river miles on private lands exist upstream on both rivers. Cole canyon is spawning/rearing habitat for steelhead trout.

Riparian Information:

Generally riparian conditions have improved along the NFJDR in this allotment since the 1981 inventory. The banks of the NFJDR are dominated by rock, pioneering willow clumps, scattered chokecherry, currant, ocean spray, mock orange, snowberry. Ponderosa pine provide moderate overstory along the river. Conditions are improving on the MFJDR (as they were rated as poor in 1981). Pine trees are present along the bank and riparian shrub species, sedges too. Cole canyon has a fairly dense layering of vegetation, including chokecherry, mock orange, elderberry, snowberry, pine and fir trees, cheatgrass, and bunchgrass dominates the understory.

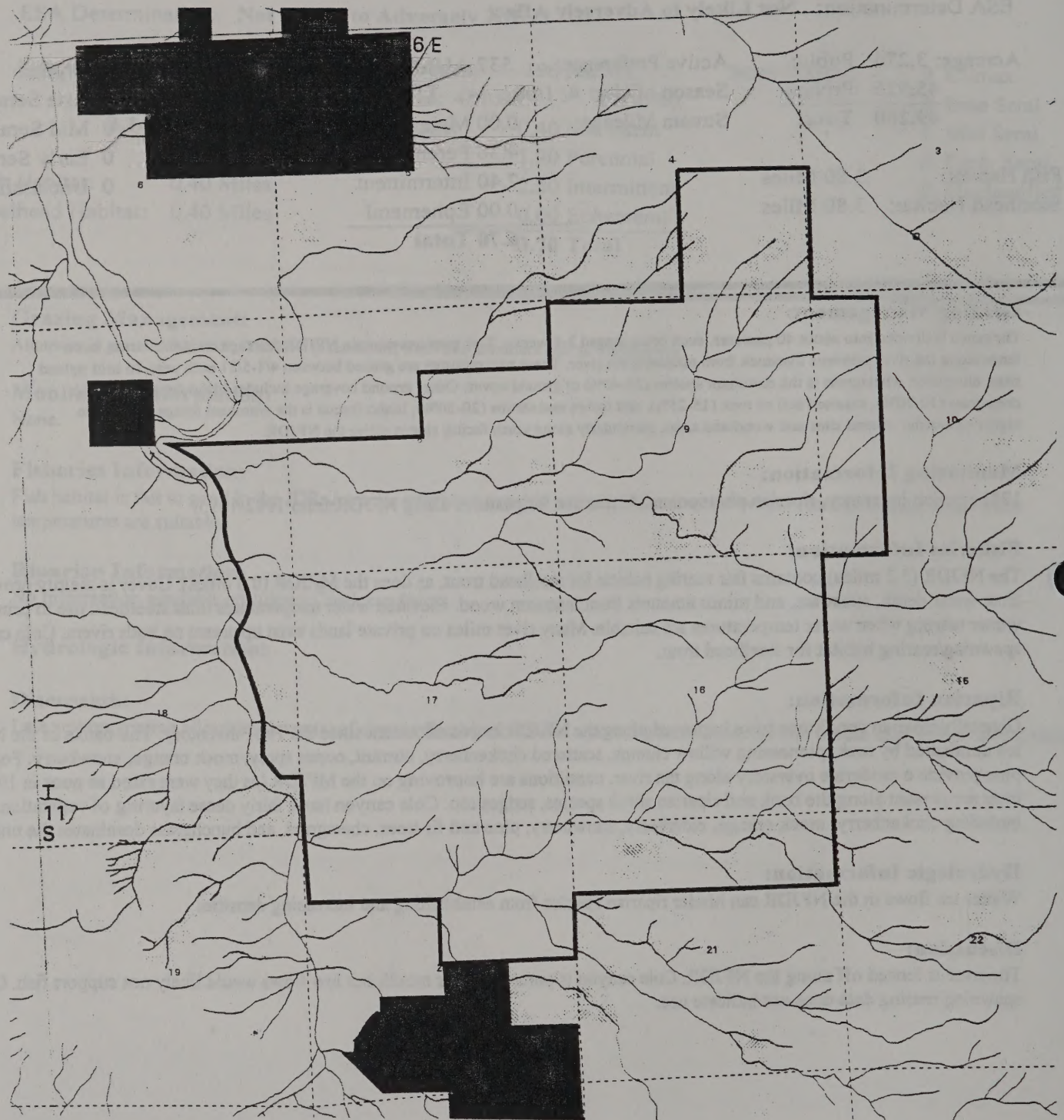
Hydrologic Information:

Winter ice flows in the NFJDR can hinder riparian species from establishing and increasing densities.

Discussion:

The river is fenced off along the NFJDR. Cole canyon is perennial near mouth but low flows would likely not support fish. ODFW spawning/rearing data does not indicate use.

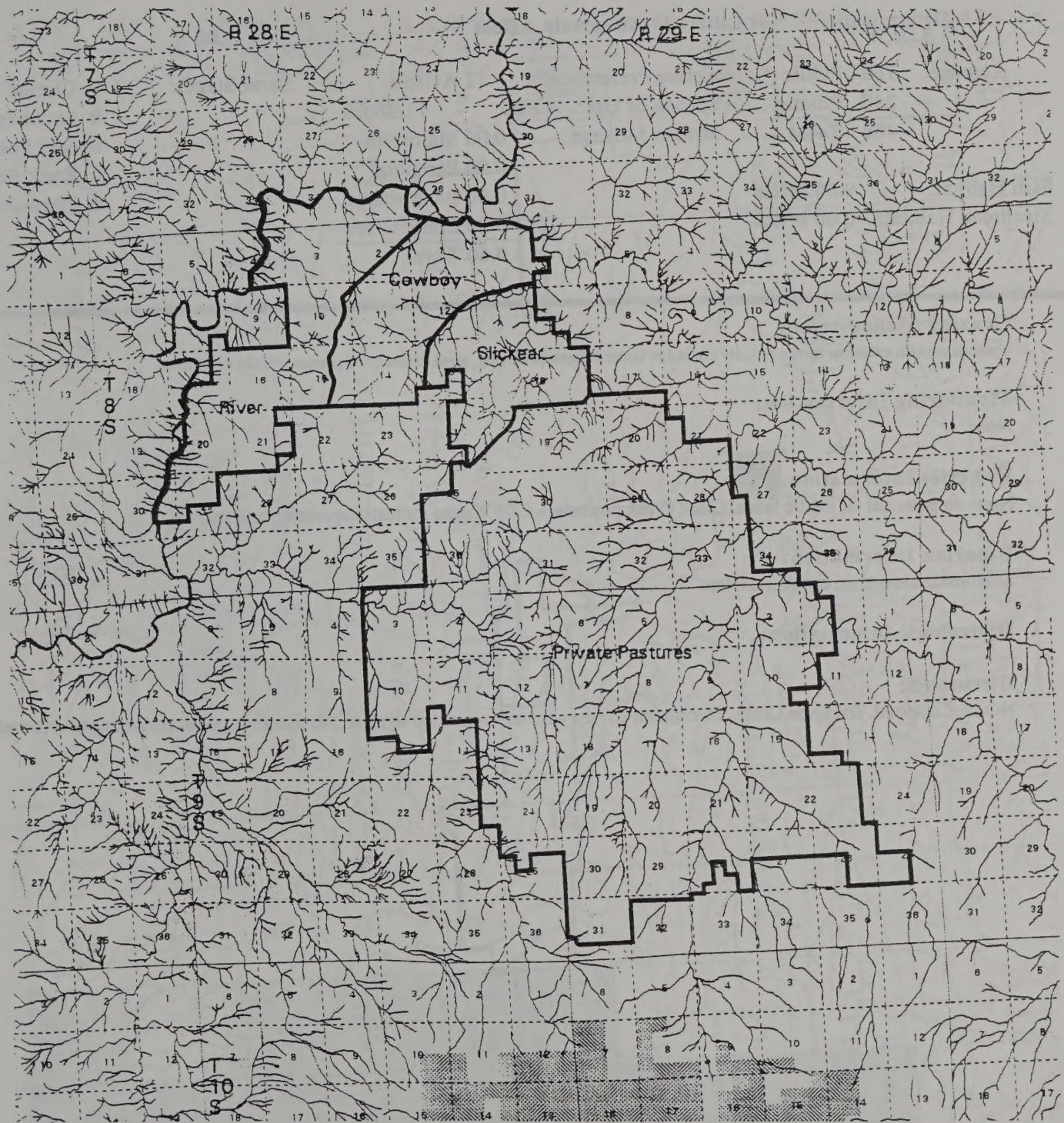
Johnny Creek Allotment #04001



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



Slickear Mountain Allotment #04003



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



06 DAMON CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage:	160 Public	Active Preference:	12 AUM's	Seral Stages:	0 Climax
	240 Private	Season of Use:	4/ 1/00 - 11/30/00		0 Late Seral
	400 Total	Stream Mileage:	0.00 Mainstem		0 Mid Seral
			0.00 Perennial		0 Early Seral
Fish Habitat:	0.00 Miles		0.60 Intermittent		0 Unclassified
Steelhead Habitat:	0.00 Miles		0.00 Ephemeral		
			0.60 Total		

Grazing Management:

Uplands contain excellent forage, mainly elk sedge under a forested canopy. good diversity of grasses, shrubs and forbes.

Monitoring Information:

None.

Fisheries Information:

None no potential on public lands. Clark Creek potential - ODFW map indicates spawning and rearing.

Riparian Information:

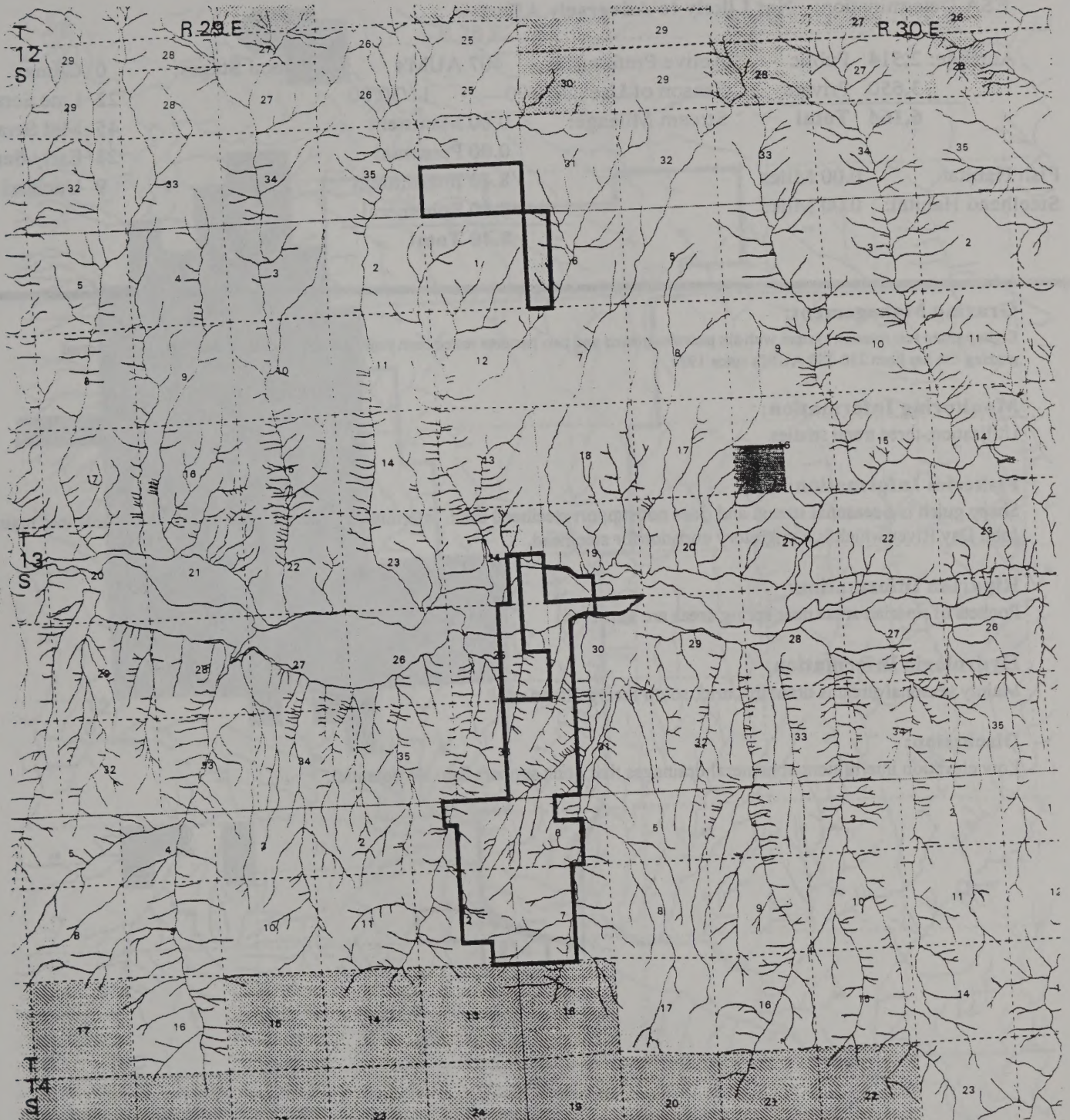
Seasonal drainage, no riparian habitat.

Hydrologic Information:

Discussion:

NOALE disposal. Dammon Creek intermittent stream with no connection to river. No public lands on stream, upland parcels.

Damon Creek Allotment #04006



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



407 WINDY POINT

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 2,514 Public	Active Preference: 407 AUM's	Seral Stages: 0 Climax
3,650 Private	Season of Use: 4/ 1/00 - 11/30/00	22 Late Seral
<u>6,164 Total</u>	Stream Mileage: 0.00 Mainstem	45 Mid Seral
	0.00 Perennial	24 Early Seral
Fish Habitat: 0.00 Miles	8.40 Intermittent	9 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>8.40 Total</u>	

Grazing Management:

Eight pasture rest rotation system with six pastures grazed and two pastures rested each year. Allotment grazed from 4/10-6/30. Actual grazing use has been 230-250 AUM's since 1984.

Monitoring Information:

Utilization, three trend studies.

Fisheries Information:

Sheep gulch is a seasonal stream and does not support steelhead trout. Intermittant drainages in this allotment flow into mainstem John Day River which is a migratory corridor for steelhead.

Riparian Information:

Pockets of riparian areas near spring areas are scattered.

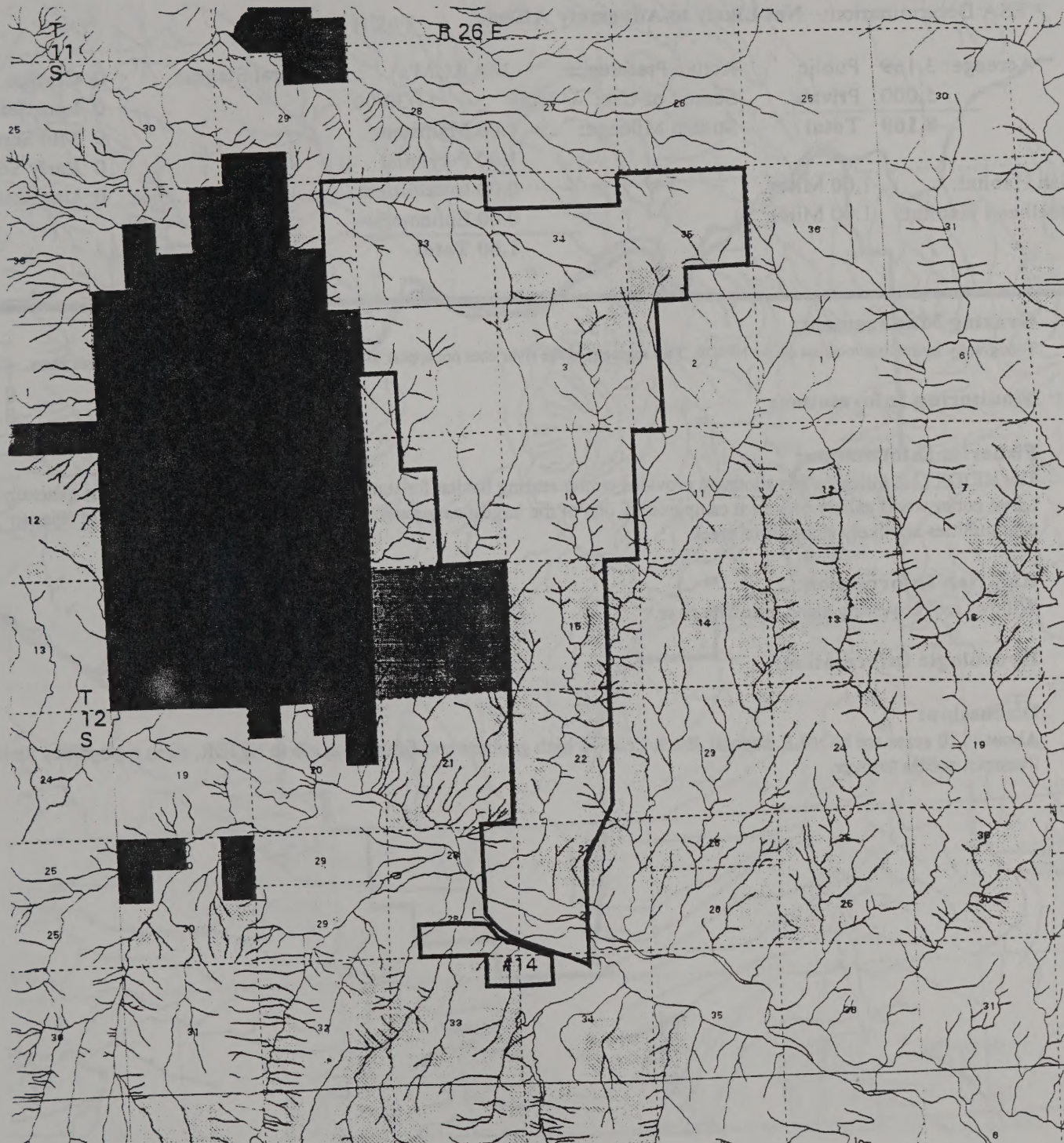
Hydrologic Information:

Mainly seasonal streams drain this arid, south facing allotment.

Discussion:

Low elevation intermittent/ephemeral drainages that don't support fish. No potential.

Windy Point Allotment #04007



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



9 BIRCH CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 3,169	Public	Active Preference:	368 AUM's	Seral Stages:	0 Climax
5,000	Private	Season of Use: 4/ 1/00	- 11/30/00		0 Late Seral
<u>8,169</u>	<u>Total</u>	Stream Mileage:	1.00 Mainstem		0 Mid Seral
			1.00 Perennial		0 Early Seral
Fish Habitat:	1.00 Miles		0.00 Intermittent		0 Unclassified
Steelhead Habitat:	1.00 Miles		0.00 Ephemeral		
			<u>1.00 Total</u>		

Grazing Management:

Topography limits livestock use on the NFJDR. This segment of the river does not appear to have been grazed significantly in recent years.

Monitoring Information:

Fisheries Information:

The NFJDR (1.0 miles) in this allotment provides winter rearing habitat for summer steelhead. Habitat conditions generally are good. Large cottonwood gallery present at campground, one of the largest cottonwood stands on the NFJDR. Clumps of riparian communities are likely along Birch creek.

Riparian Information:

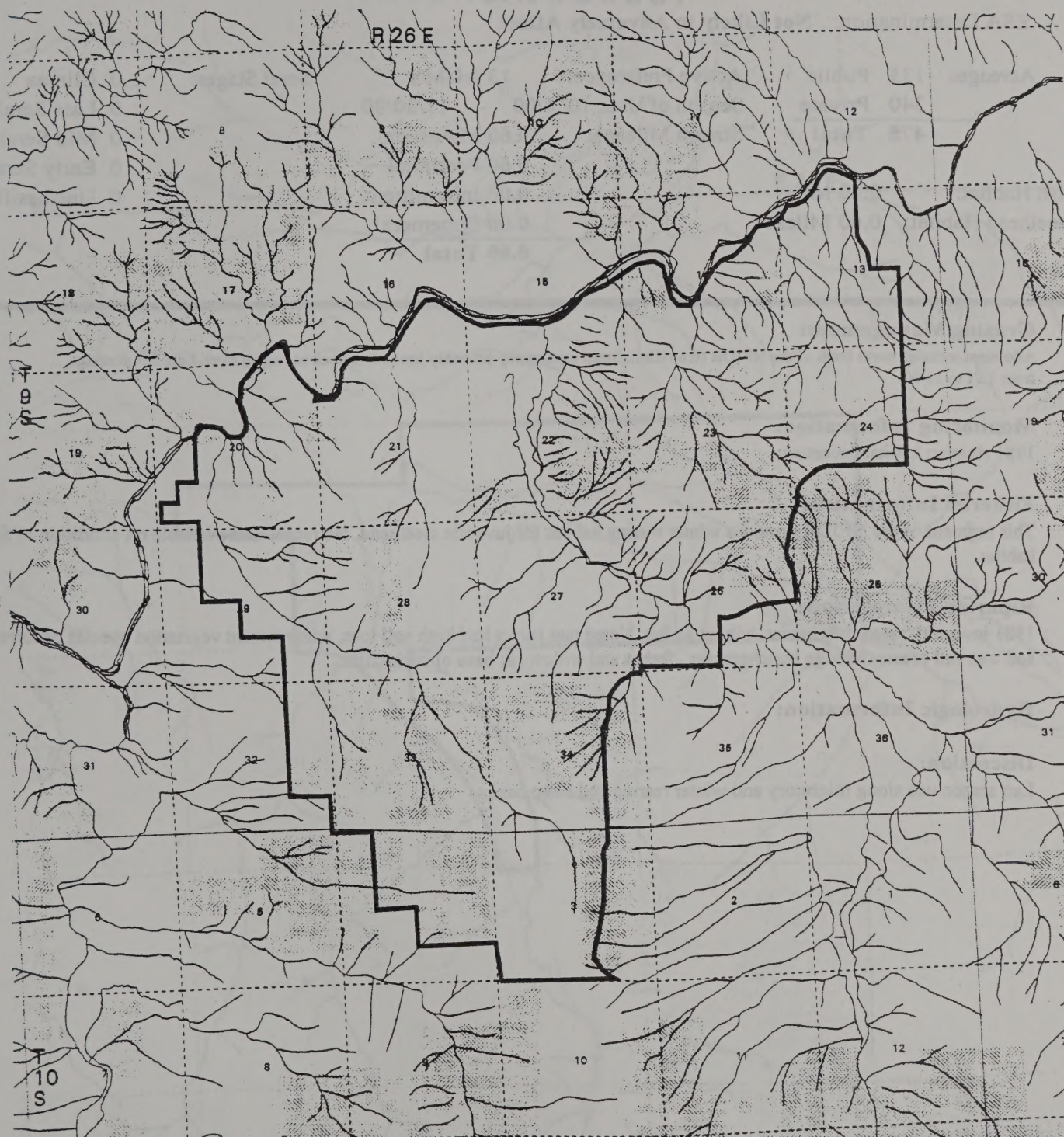
Willows are recovering along mainstem river.

Hydrologic Information:

Discussion:

About 1120 acres are NOALE disposal. Birch Creek is high gradient non-fishbearing trib to NFJDR, steep topography limits livestock access to river.

Birch Creek Allotment #04009



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



2012 RIVER

ESA Determination: **Not Likely to Adversely Affect**

Acreage:	135 Public	Active Preference:	13 AUM's	Seral Stages:	0 Climax
	340 Private	Season of Use:	10/ 1/00 - 11/30/00		0 Late Seral
	475 Total	Stream Mileage:	0.60 Mainstem		0 Mid Seral
			0.60 Perennial		0 Early Seral
Fish Habitat:	0.60 Miles		0.00 Intermittent		0 Unclassified
Steelhead Habitat:	0.60 Miles		0.00 Ephemeral		
			0.60 Total		

Grazing Management:

Allotment includes north bank of the NFJDR (0.6 miles). Steep topography probably limits livestock use along river. Late fall grazing from 10/1 to 11/30.

Monitoring Information:

1981 riparian habitat inventory.

Fisheries Information:

This segment of the NFJDR provides winter rearing habitat for juvenile steelhead. No recent data available on condition of fish habitat.

Riparian Information:

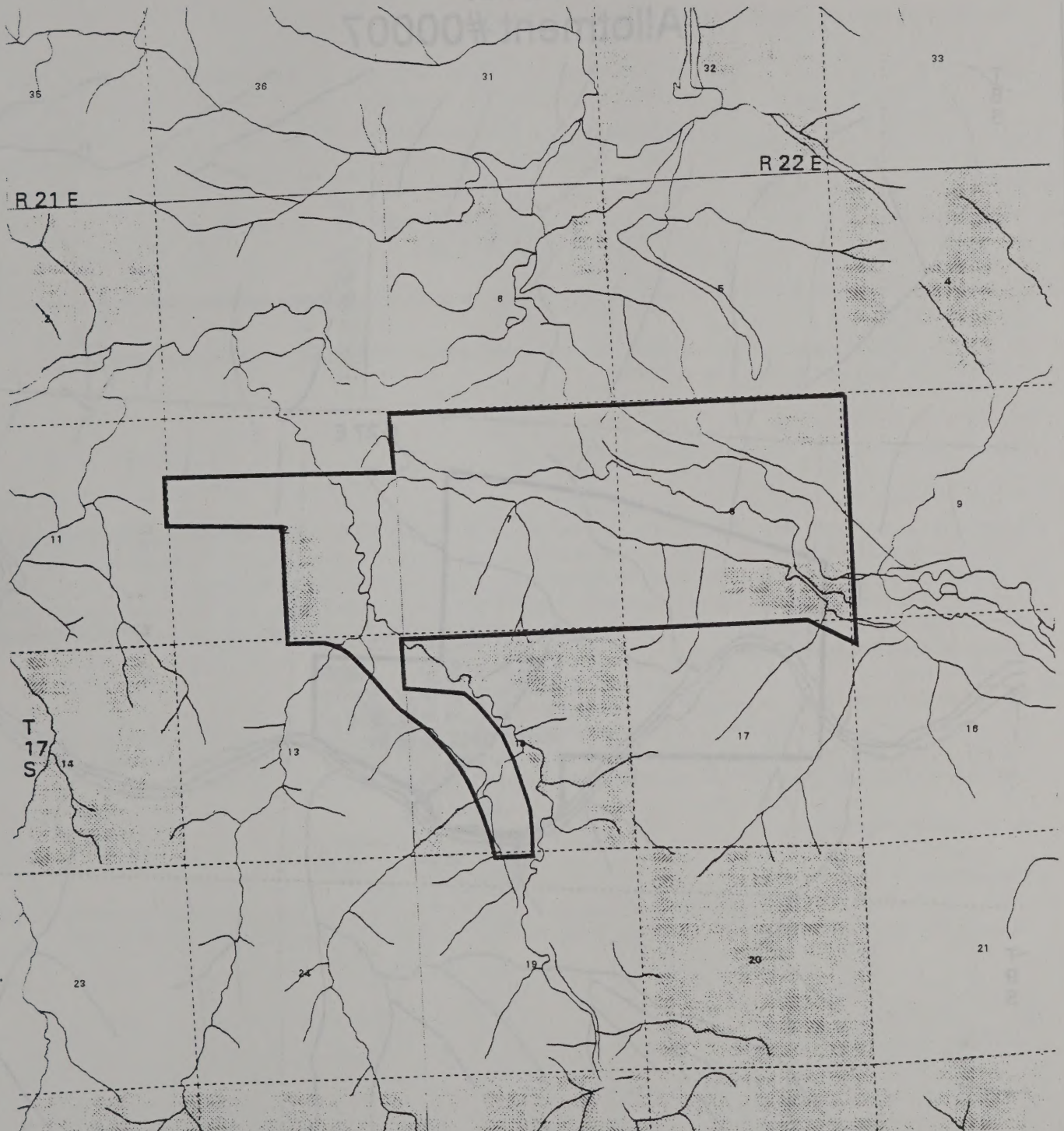
1981 inventory rated the riparian habitat as fair. Noted that banks had high soil loss, with remnant vegetation species occurred where soil was still present. Sedge bunchgrasses, forbes and willows at base of rock cliffs.

Hydrologic Information:

Discussion:

Late season use along migratory and winter rearing and steep banks.

River Allotment #00007



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



River Allotment #00007

T
8
S

38

31

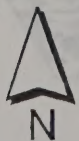
R 27 E

2

T
9
S

12

11



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



4 MIDDLE FORK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 562 Public	Active Preference: 77 AUM's	Seral Stages:	0 Climax
3,600 Private	Season of Use: 4/ 1/00 - 5/31/00		0 Late Seral
<u>4,162 Total</u>	Stream Mileage: 0.90 Mainstem		0 Mid Seral
	1.20 Perennial		0 Early Seral
Fish Habitat: 1.20 Miles	0.60 Intermittent		0 Unclassified
Steelhead Habitat: 1.20 Miles	<u>0.00 Ephemeral</u>		
	1.80 Total		

Grazing Management:

Season of use changed to 4/1 -5/31 on parcels with perennial stream in 1998 (MFJDR and Huckleberry Creek). Livestock access to Huckleberry Creek prevented by dense woody vegetation.

Monitoring Information:

Riparian photopoints, 1981 riparian habitat inventory.

Fisheries Information:

This allotment contains 0.9 miles of the MFJDR (divided between four segments) and 0.2 miles of Huckleberry Creek. The MFJDR contains fair to good fish habitat with cover from substrate and overhanging vegetation (mainly sedge bunchgrasses). Huckleberry creek has excellent cover from instream wood, overhanging shrubs and trees and a narrow, moderately deep channel. All BLM segments provide summer rearing habitat for steelhead except for BLM parcel on MFJDR at RM 22.0, which is winter rearing habitat. Huckleberry Creek probably has spawning habitat for steelhead trout. BLM stream segments on the MFJDR do not have suitable substrate for steelhead spawning.

Riparian Information:

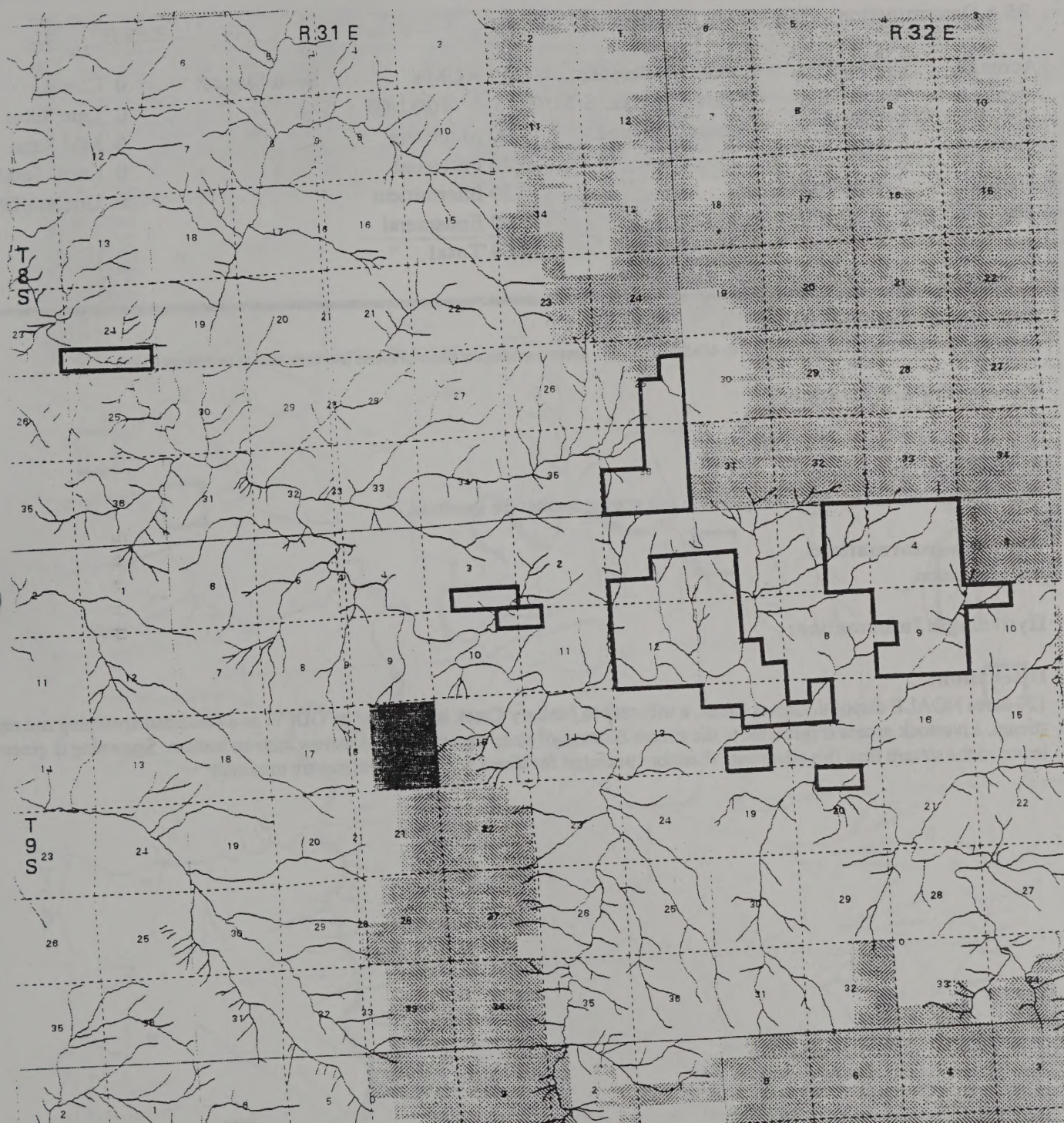
Riparian areas along the MFJDR generally are good, with recovery occurring of streamside vegetation, especially sedges and willows. The MFJDR parcel near RM 22.0 has recently been impacted by livestock trampling. Riparian condition of Huckleberry creek is in excellent condition with a diverse assemblage of species. Very dense cover provided to stream.

Hydrologic Information:

Discussion:

NOALE disposal about 440 acres including 2 of 4 parcels on MFJDR. Limited grazing along NFJDR and Huckleberry Creek, good heavy riparian hardwood cover along Huckleberry limits access and the likelihood of direct effects to steelhead redds.

Middle Fork Allotment #04014



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



2015 MUD SPRINGS

ESA Determination: Not Likely to Adversely Affect

Acreage: 240 Public	Active Preference: 30 AUM's	Seral Stages:	0 Climax
0 Private	Season of Use: 5/31/00 - 10/31/00		0 Late Seral
<u>240 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.20 Perennial		0 Early Seral
Fish Habitat: 0.20 Miles	0.30 Intermittent		0 Unclassified
Steelhead Habitat: 0.20 Miles	0.00 Ephemeral		
	<u>0.50 Total</u>		

Grazing Management:

Grazing season on Graves creek restricted to 4/1-5/31 in 1998. Steep topography likely prevents livestock access to Graves Creek.

Monitoring Information:

None.

Fisheries Information:

Graves creek (0.2 miles) provides spawning and rearing habitat for steelhead.

Riparian Information:

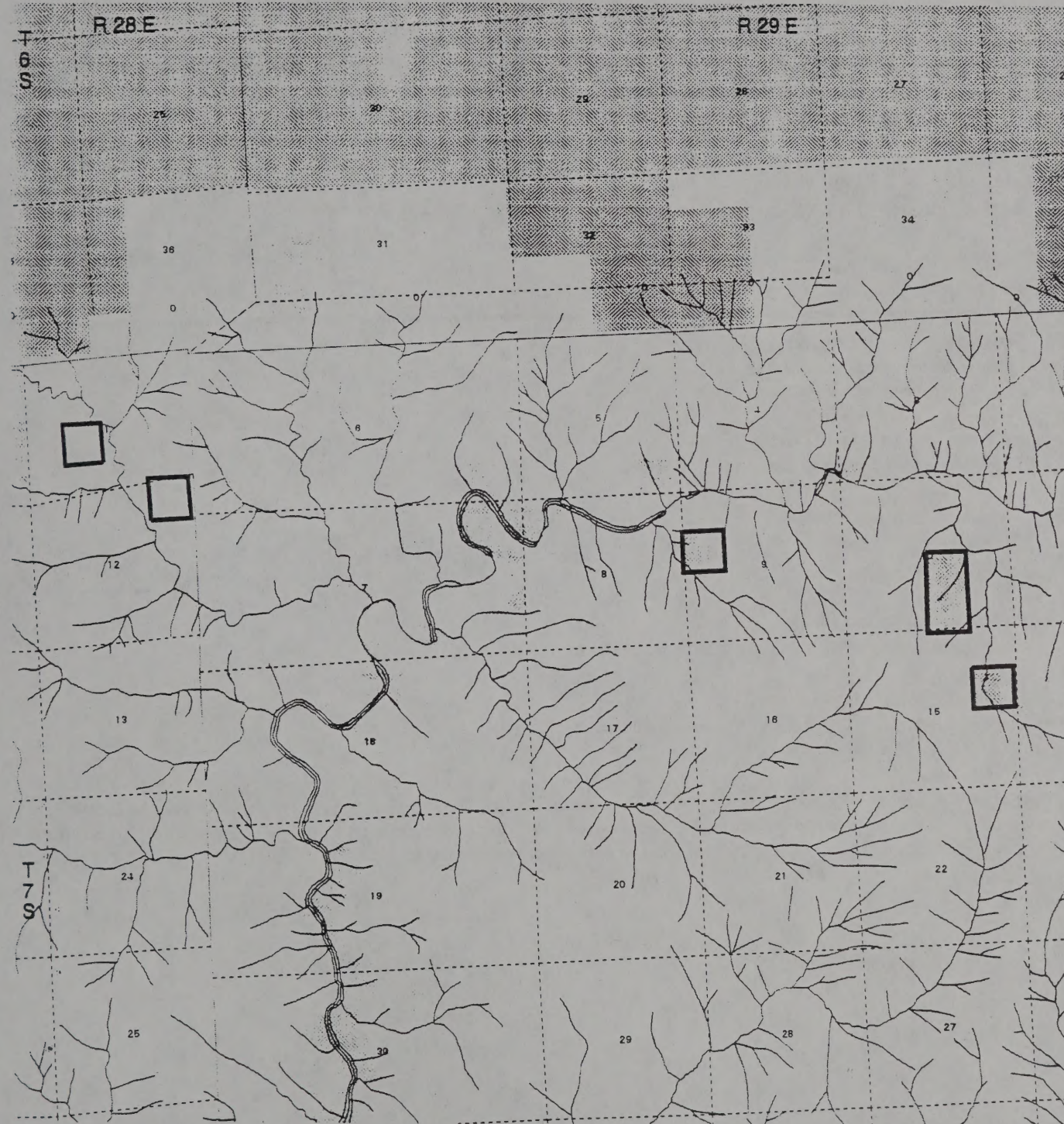
No information.

Hydrologic Information:

Discussion:

120 acres NOALE disposal. Graves Creek, a tributary to Mallory Creek is identified by ODFW as a steelhead spawning and rearing stream. Livestock access is restricted to the stream because of steep topography and narrow canyon bottom. Spawning is generally lower in the stream than this allotment. Therefore potential for direct and indirect effects are minimal.

Mud Springs Allotment #04015



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



22 LONG HOLLOW

ESA Determination: **Not Likely to Adversely Affect**

Acreage:	80 Public	Active Preference:	8 AUM's	Seral Stages:	0 Climax
	2,080 Private	Season of Use:	4/ 1/00 - 11/30/00		0 Late Seral
	2,160 Total	Stream Mileage:	0.00 Mainstem		0 Mid Seral
			0.20 Perennial		0 Early Seral
Fish Habitat:	0.20 Miles		0.40 Intermittent		0 Unclassified
Steelhead Habitat:	0.20 Miles		0.00 Ephemeral		
			0.60 Total		

Steelhead habitat is spawning and rearing in Cottonwood Creek.

Grazing Management:

Custodail allotment, small amount of public land. No actual use data available. Grazing season is from 4/15-5/31 in T11s, R28E SW 1/4 SE 1/4 of section 6 on Cottonwood Creek.

Monitoring Information:

There are no monitoring studies on this allotment.

Fisheries Information:

The segment of Cottonwood Creek on public land is in poor condition, and potentially is spawning and rearing habitat for steelhead trout.

Riparian Information:

Condition is poor with minimal riparian species present.

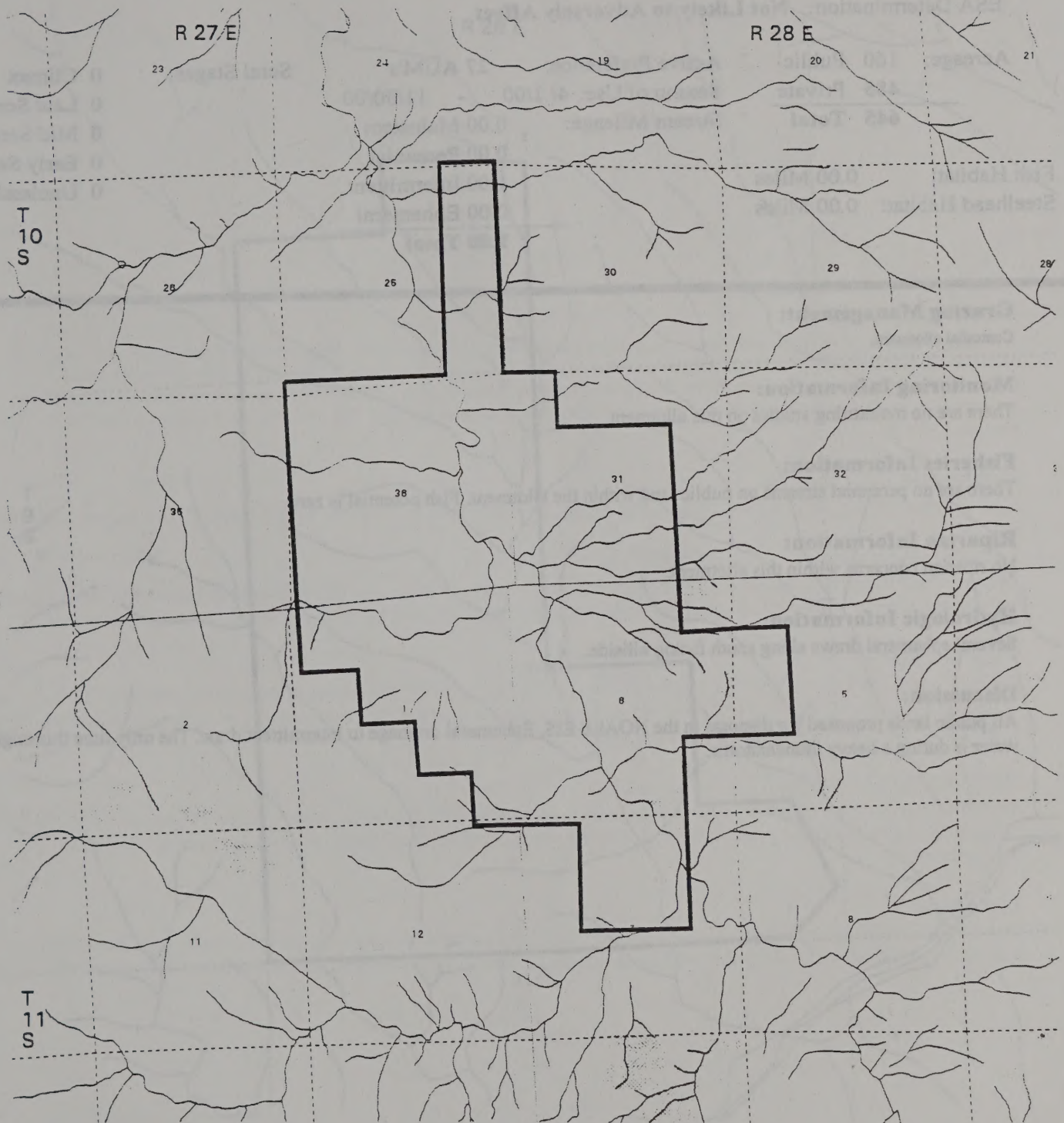
Hydrologic Information:

Cottonwood Creek flows through a steep canyon on BLM.

Discussion:

All public lands proposed for disposal in the NOALE EIS. This BLM parcel contains 0.2 miles of spawning/rearing habitat for steelhead. Potential is possible for direct effects to steelhead redds, however, most spawning occurs in Fox Creek approximately 7 miles upstream. Indirect effects potential are high because of degraded stream condition and lack of vegetation for bank stability.

Long Hollow Allotment #04022



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



225 PORTUGUESE

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 160 Public	Active Preference: 27 AUM's	Seral Stages: 0 Climax
485 Private	Season of Use: 4/ 1/00 - 11/30/00	0 Late Seral
<u>645 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	1.00 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>1.00 Total</u>	

Grazing Management:

Custodial allotment.

Monitoring Information:

There are no monitoring studies on this allotment.

Fisheries Information:

There are no perennial streams on public land within the allotment. Fish potential is zero.

Riparian Information:

No riparian concerns within this allotment.

Hydrologic Information:

Several ephemeral draws along south facing hillside.

Discussion:

All public lands proposed for disposal in the NOALE EIS. Ephemeral drainage to intermittent draw. The only time this might run water is during a heavy thunderstorm.

Portuguese Allotment #04025

R 26 E

2

11

T 9 S



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



28 NEAL BUTTE

ESA Determination: Not Likely to Adversely Affect

Acreage: 712 Public	Active Preference: 119 AUM's	Seral Stages: 0 Climax
2,800 Private	Season of Use: 4/ 1/00 - 5/31/00	0 Late Seral
<u>3,512 Total</u>	Stream Mileage: 3.20 Mainstem	0 Mid Seral
	3.20 Perennial	0 Early Seral
Fish Habitat: 3.20 Miles	0.70 Intermittent	0 Unclassified
Steelhead Habitat: 3.20 Miles	0.00 Ephemeral	
	<u>3.90 Total</u>	

Grazing Management:

The allotment contains three pastures. A riparian pasture that contains most of the public lands along the North Fork John Day River was created in 1996. That pasture was rested in 1997 and 1998. It is scheduled for grazing use from 4/15 to 5/31 in 1999. The North pasture (upland, 95% private) is currently grazed all season. The South pasture (which contains 1.0 mile NFJDR on BLM) has historically been grazed season long. Actual use has been approximately 100 AUM's on BLM lands annually. The south pasture grazing system has been changed to 4/15-5/31.

Monitoring Information:

Riparian photopoint in the riparian pasture along the NFJDR established in 1998. Utilization and actual use information on file.

Fisheries Information:

This section of the NFJDR supports juvenile steelhead winter rearing habitat, and winter migratory habitat for bull trout and redband trout habitat. Other species present include northern squawfish, suckers, dace, minnows, and smallmouth bass.

Riparian Information:

Riparian vegetation in the riparian pasture is beginning to improve after 2 years of rest. Unauthorized grazing in 1997 did limit rate of recovery. Rock banks and bedrock areas will continue to keep vegetation reestablishment slow. In the South pasture, riparian condition is poor, from years of hot season grazing.

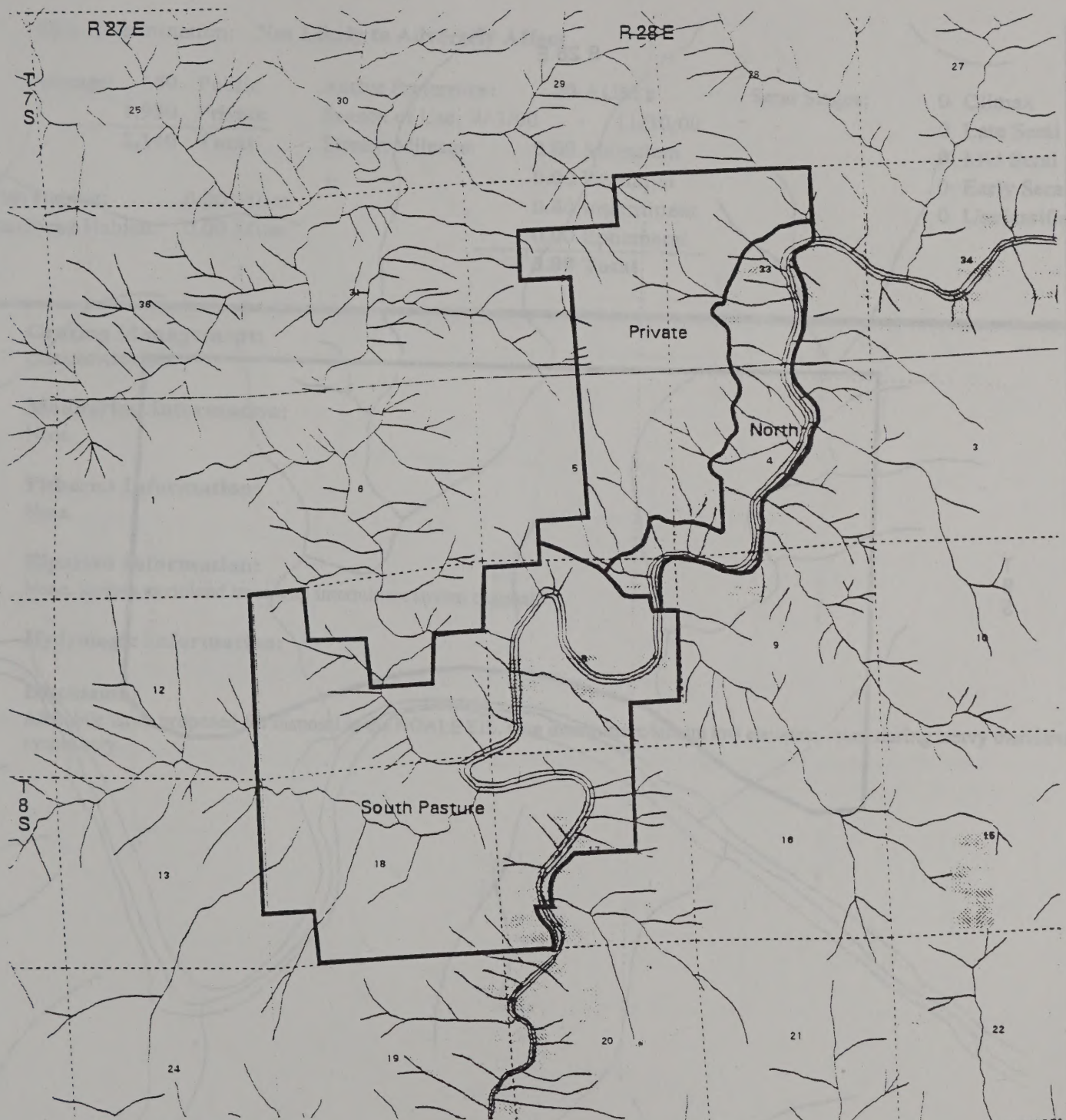
Hydrologic Information:

Bedrock substrate, large cobble on streambanks will make recovery of vegetation a slow process. This reach of the NFJDR is functioning at risk. Ice flows in NFJDR subbasin gouge and destabilize streambanks, potentially retarding vegetation re-establishment.

Discussion:

This allotment was field reviewed by BLM and NMFS staff and the permittee in April 1994. Since this is winter rearing and migratory habitat the potential for direct effects is minimal. Potential for good vegetated banks is low due to poor site conditions.

Neal Butte Allotment #04028



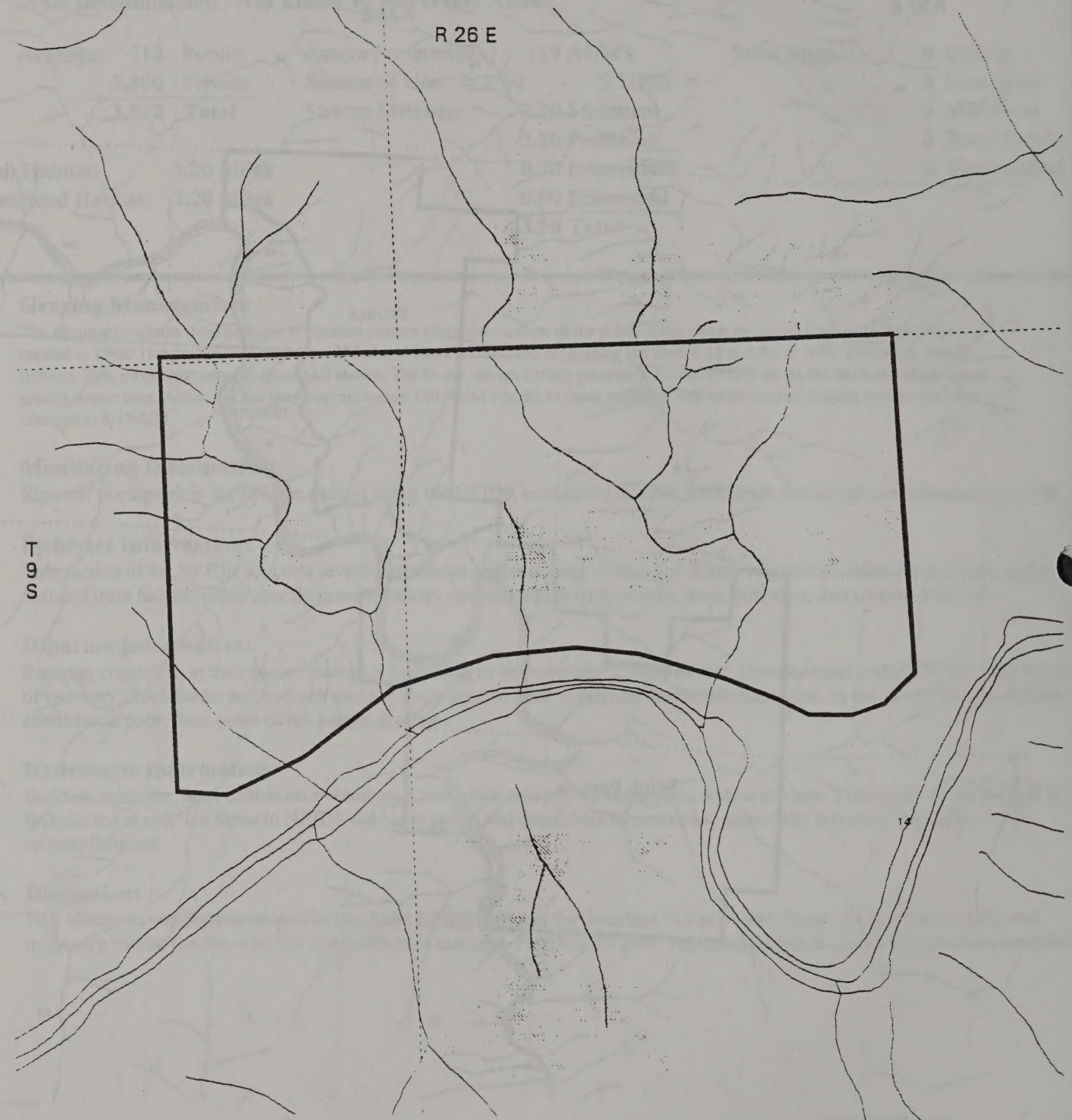
Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



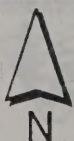
Powersite Allotment #04030

R 26 E

T 9 S



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



31 COYOTE FIELD

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 160 Public
1,980 Private
2,140 Total

Active Preference: 20 AUM's
Season of Use: 4/ 1/00 - 11/30/00
Stream Mileage: 0.00 Mainstem
0.00 Perennial
0.80 Intermittent
0.00 Ephemeral
0.80 Total

Seral Stages: 0 Climax
0 Late Seral
0 Mid Seral
0 Early Seral
0 Unclassified

Fish Habitat: 0.00 Miles
Steelhead Habitat: 0.00 Miles

Grazing Management:

Custodial Allotment.

Monitoring Information:

None.

Fisheries Information:

None.

Riparian Information:

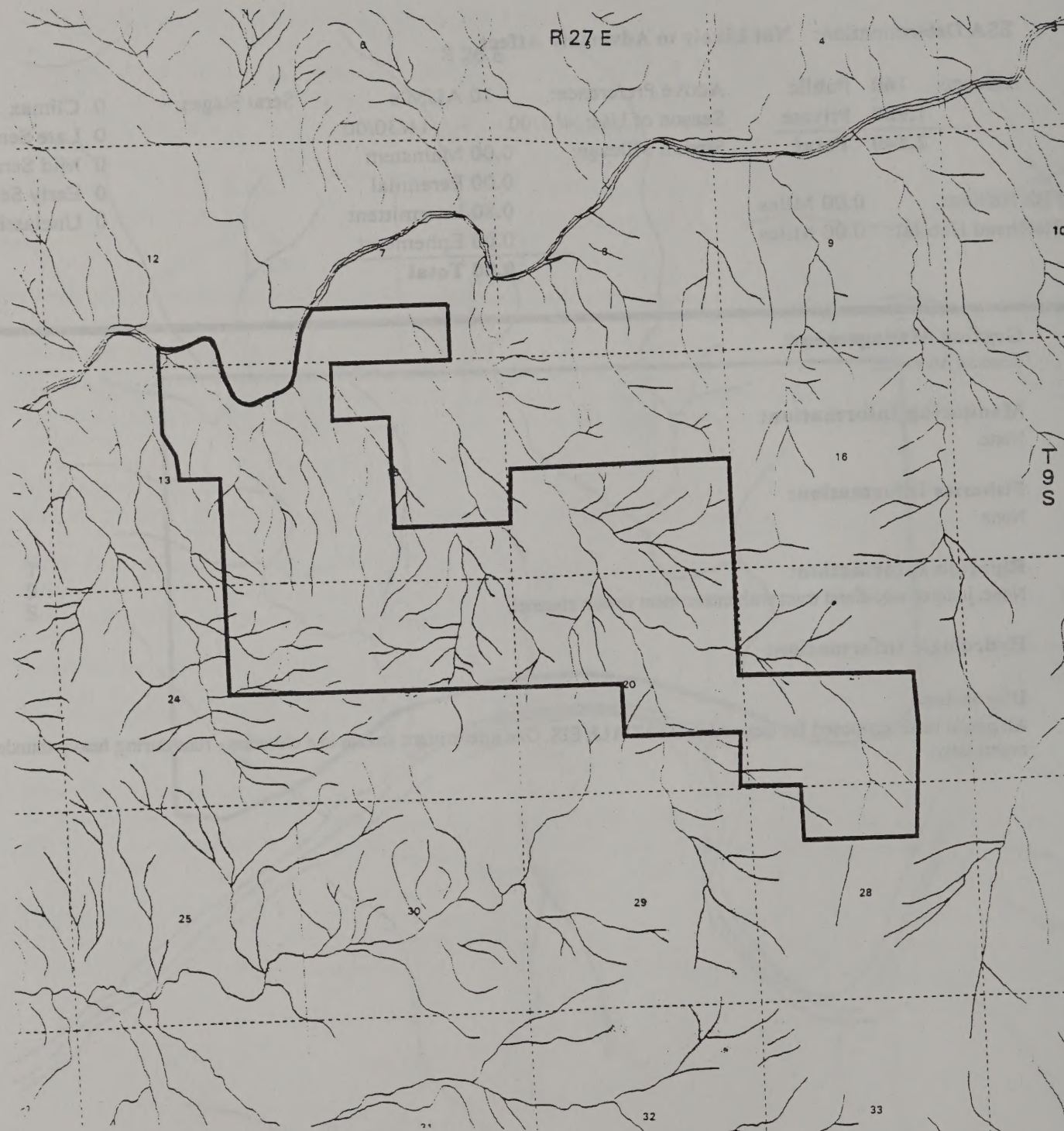
None, juniper woodland tract with intermittent stream channel.

Hydrologic Information:

Discussion:

All public lands proposed for disposal in the NOALE EIS. One intermittent stream low elevation - runs during heavy thunderstorm events only.

Coyote Field Allotment #04031



7 JUNIPER

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 400 Public
0 Private
400 Total

Active Preference: 40 AUM's
Season of Use: 4/ 1/00 - 11/30/00
Stream Mileage: 0.00 Mainstem
0.00 Perennial
1.10 Intermittent
0.00 Ephemeral
1.10 Total

Seral Stages: 0 Climax
0 Late Seral
0 Mid Seral
0 Early Seral
0 Unclassified

Fish Habitat: 0.00 Miles
Steelhead Habitat: 0.00 Miles

Grazing Management:

Custodial Allotment.

Monitoring Information:

None.

Fisheries Information:

None, no potential.

Riparian Information:

None, no potential.

Hydrologic Information:

several intermittent drainages on moderately steep south facing slopes.

Discussion:

NOALE Disposal tracts. Low intermittent drainages only run during heavy thunderstorm events no potential for fish.

Juniper Allotment #04037

R 26 E

T 19 S

15

2

14



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



18 DAYVILLE

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,640 Public	Active Preference: 141 AUM's	Seral Stages: 0 Climax
2,122 Private	Season of Use: 6/ 1/00 - 7/13/00	34 Late Seral
3,762 Total	Stream Mileage: 0.00 Mainstem	39 Mid Seral
	2.60 Perennial	23 Early Seral
Fish Habitat: 0.00 Miles	3.20 Intermittent	4 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	5.80 Total	

Grazing Management:

Actual grazing use has been from 4/1 to 5/31.

Monitoring Information:

None.

Fisheries Information:

No known steelhead habitat in Battle Creek and therefore highly unlikely in Long Hollow a tributary to Battle Creek. It is highly unlikely that steelhead enter the Battle Creek watershed, most if not all water from Battle Creek is diverted into a small pond between its mouth and public land.

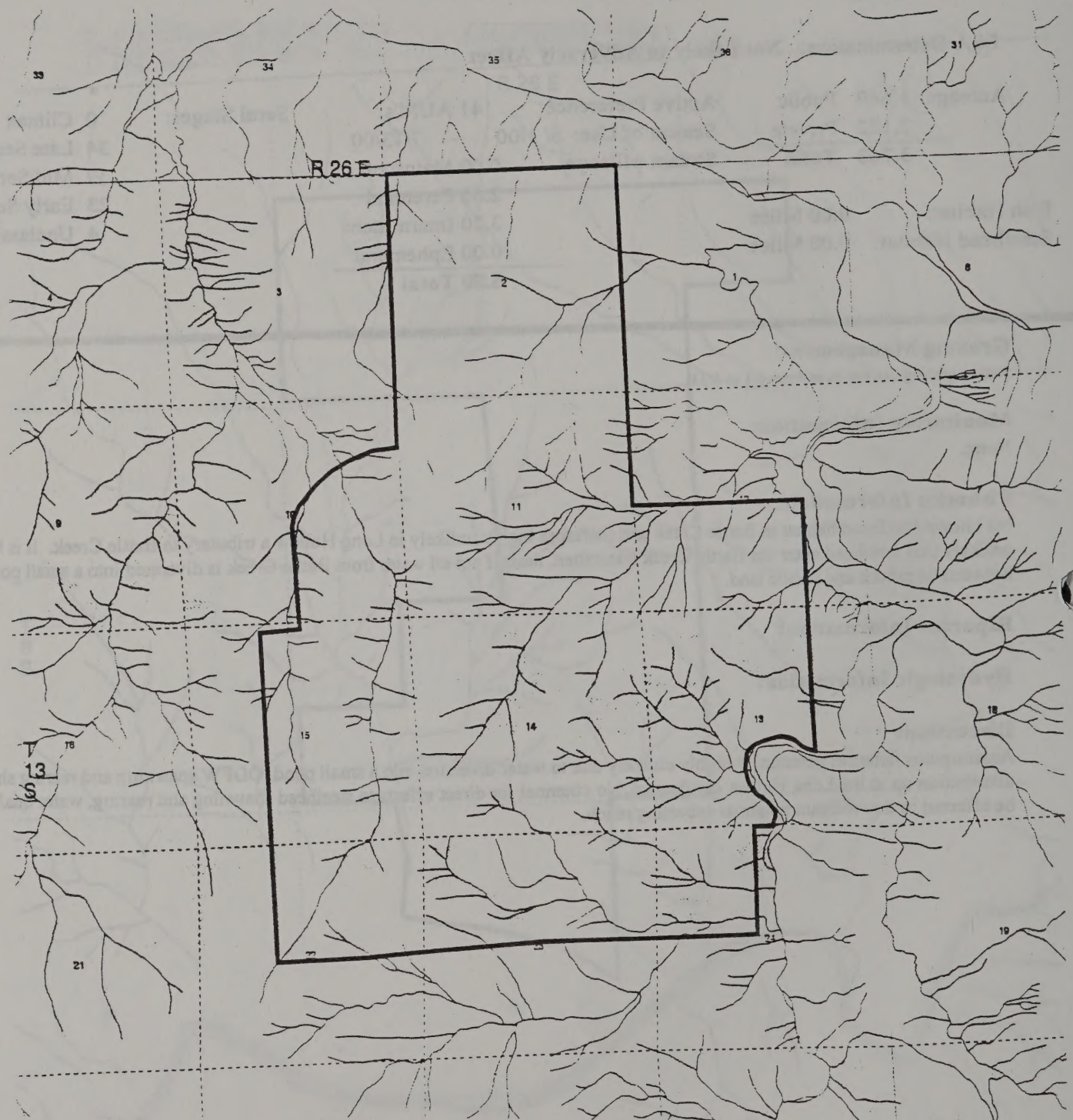
Riparian Information:

Hydrologic Information:

Discussion:

Anadromous fisheries potential is highly unlikely due to water diversion into a small pond. ODFW spawning and rearing show fish distribution up to the Long Hollow confluence. No potential for direct effects to steelhead spawning and rearing, water quality may be affected to downstream potential spawning reach.

Dayville Allotment #04038



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



41 FRANKS CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 2.617 Public	Active Preference: 223 AUM's	Seral Stages: 0 Climax
1,255 Private	Season of Use: 4/ 1/00 - 11/30/00	4 Late Seral
3,872 Total	Stream Mileage: 0.00 Mainstem	69 Mid Seral
	1.70 Perennial	26 Early Seral
Fish Habitat: 2.70 Miles	5.80 Intermittent	1 Unclassified
Steelhead Habitat: 0.90 Miles	0.00 Ephemeral	
	7.50 Total	

Grazing Management:

There are two pastures (North and South) The South pasture is grazed 4/15 to 5/15 and the North pasture is grazed from 5/16 to 8/30. BLM intends to increase compliance monitoring to control unauthorized use. In the North pasture 1 1/2 months of use within BLM parcel in T12S, R27E section 5, W1/2NE1/4, E1/2NW1/2, NW1/4SE1/4 (Franks Creek)

Monitoring Information:

A trend study and actual use since 1992. 1981 riparian habitat inventory with photo points.

Fisheries Information:

Steelhead potentially use Franks Creek for spawning/rearing habitat. Available spawning habitat is limiting on public lands. A waterfall barrier between the N. and S. pastures prevents steelhead access to the upper 0.8 miles of Franks Creek in this allotment.

Riparian Information:

Franks and Ferris Creeks are both functioning at risk. riparian condition is poor to fair on Franks Creek. Hot season grazing is retarding recovery. Adjacent road limits riparian vegetation, and encroaches floodplain of Franks Creek.

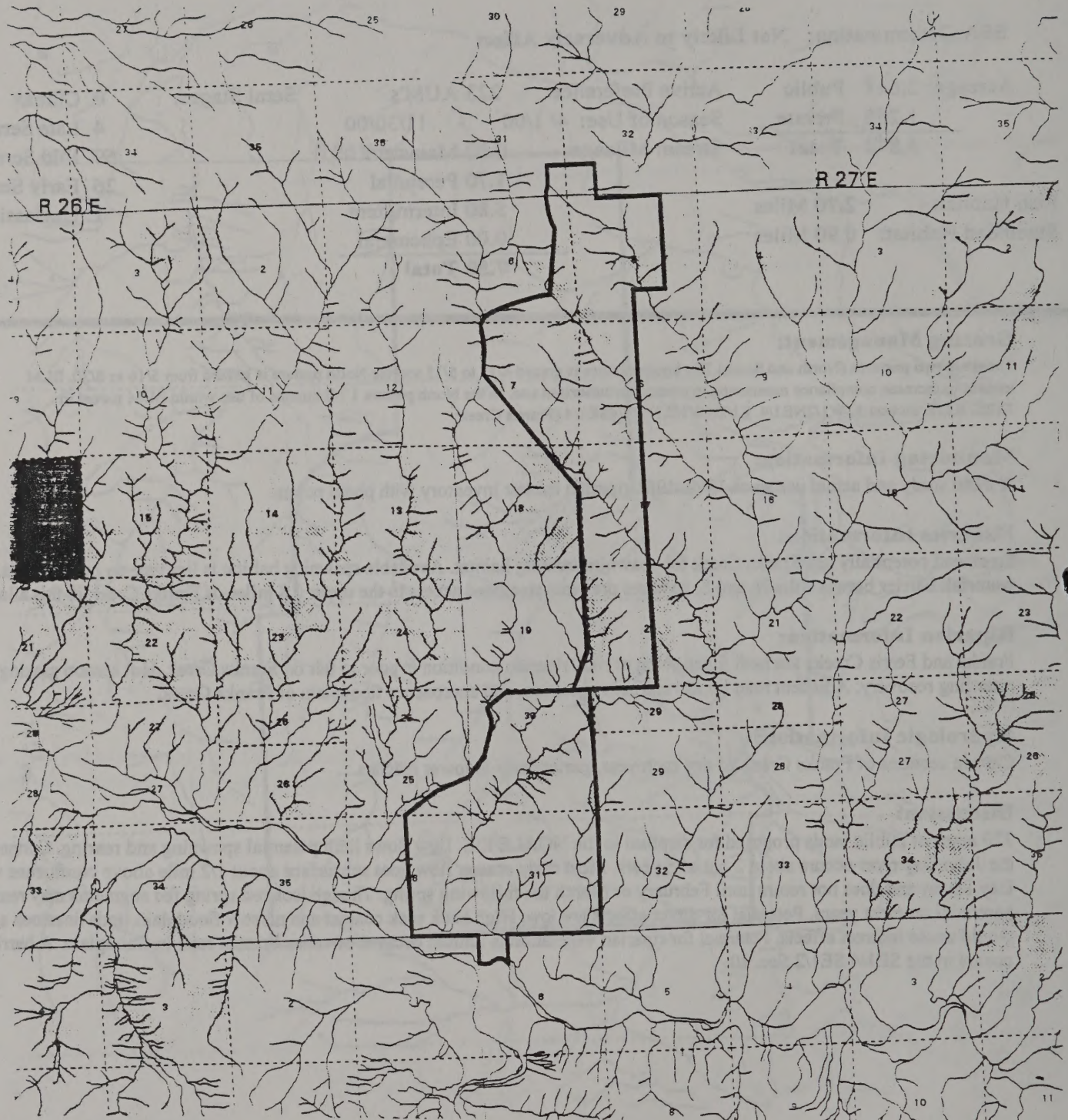
Hydrologic Information:

Certain sections of Franks Creek go dry each year, particularly in lower reaches.

Discussion:

320 acres of public lands proposed for disposal in the NOALE EIS. Low flows limit potential spawning and rearing. Connection to the John Day river occurs about 2 out of 5 years. Most early season flow goes subsurface about 1/2 mile above confluence with John Day River, and does not return until February or March the following spring. Though isolated spring fed segments may remain perennial on most years. Potential for direct effects are low. High bank rock content and narrow floodplain limit livestock access that would cause indirect effects. Potential for riparian vegetation is limited because of valley bottom road in floodplain. A barrier falls occurs in the SE1/4 SE1/2 Sec. 20.

Franks Creek Allotment #04041



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



17 LITTLE INDIAN

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 200 Public	Active Preference: 25 AUM's	Seral Stages:	0 Climax
700 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
<u>900 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.20 Perennial		0 Early Seral
Fish Habitat: 0.20 Miles	0.80 Intermittent		0 Unclassified
Steelhead Habitat: 0.20 Miles	<u>0.00 Ephemeral</u>		
	1.00 Total		

Grazing Management:

Grazing season changed to 4/1 to 5/31 in 1998. The allotment was not grazed in 1998.

Monitoring Information:

Actual use for 1989 was 6/15-7/8 (4 AUM's).

Fisheries Information:

W. Little Indian supports steelhead spawning/rearing habitat.

Riparian Information:

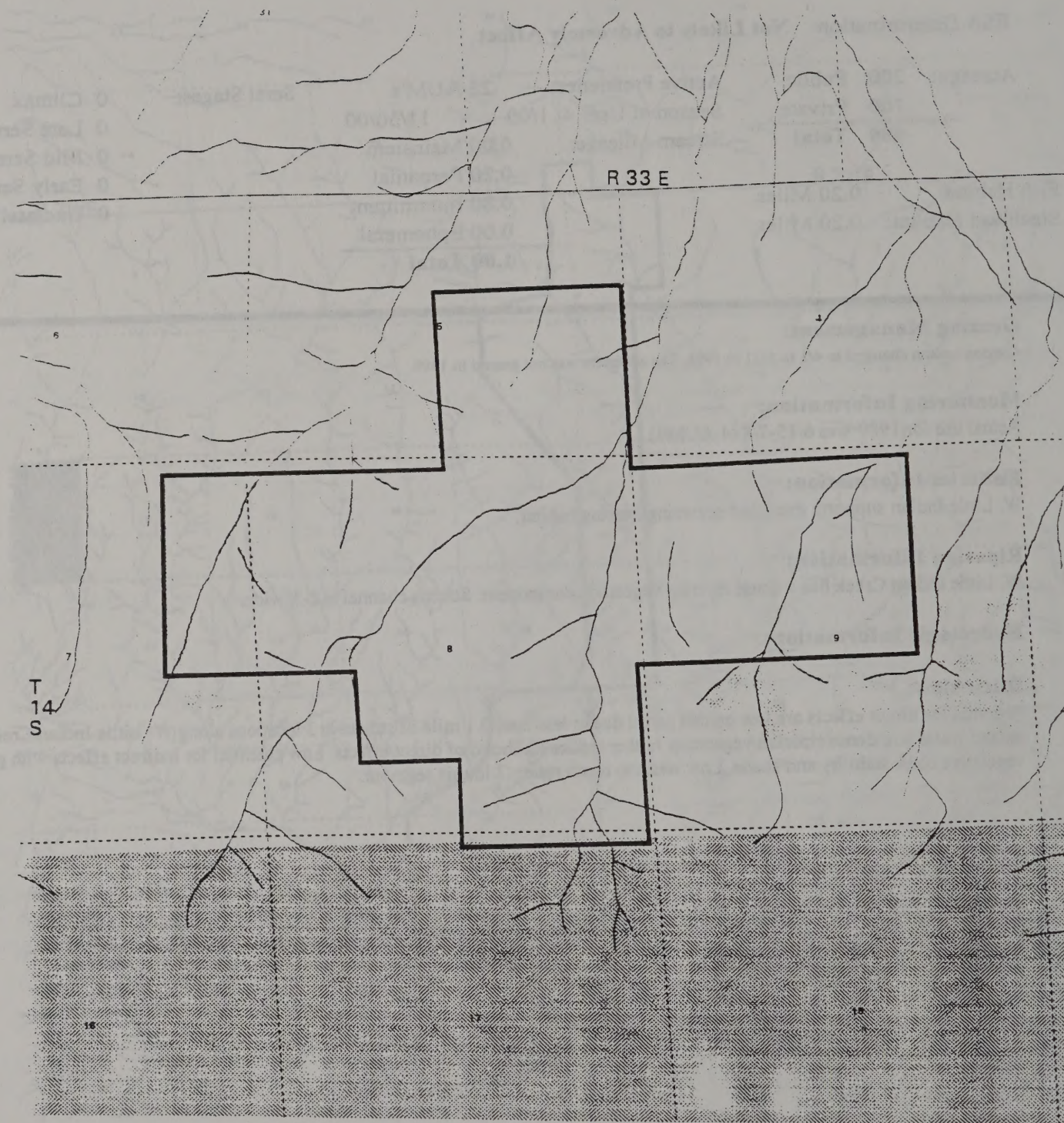
W. Little Indian Creek has a dense riparian vegetation component. Stream channel is 2-3' wide.

Hydrologic Information:

Discussion:

Potential for direct effects are low on this parcel due to less than 0.1 mile of stream at 3 locations along W. Little Indian Creek. Good upland water and dense riparian vegetation further reduce likelihood of direct effects. Low potential for indirect effects with good vegetative bank stability and shade. Low width to depth ratio <7 in this segment.

Little Indian Allotment #04047



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



9 BATTLE CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 4,958 Public	Active Preference: 830 AUM's	Seral Stages: 0 Climax
1,928 Private	Season of Use: 4/ 1/00 - 11/30/00	15 Late Seral
<u>6,886 Total</u>	Stream Mileage: 0.00 Mainstem	56 Mid Seral
	5.00 Perennial	28 Early Seral
Fish Habitat: 0.00 Miles	12.60 Intermittent	1 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>17.60 Total</u>	

Grazing Management:

Actual grazing season has been 4/1 to 6/30 since 1990. Eight pasture rotation system, with two pastures rested each year. Actual use has been collected since 1990, averaging 500 AUM's per year.

Monitoring Information:

Four riparian photopoints, utilization studies, actual use information and 7 trend studies. Water temperature data logger in Battle Creek. Riparian habitat inventories were conducted in 1981 and 1989.

Fisheries Information:

Battle creek has good perennial stream flow and has the potential to support steelhead spawning/rearing habitat. It is unknown if migration barriers exist downstream of the public lands that are preventing steelhead from accessing upper reaches of the stream. No fish have been observed in Battle Creek on public lands. Surveys have been conducted in early spring February-March and April revealing no anadromous fish, water flows at this time are typically too low to support anadromous fish.

Riparian Information:

Riparian condition on Battle creek is on an upward trend. Willows, cottonwoods, birch, dogwood, alders, and other species are increasing in occurrence and stature from 1981 survey, when the lower 1.5 miles of stream was virtually devoid of any vegetation. Recovery is occurring through nearly all stream segments.

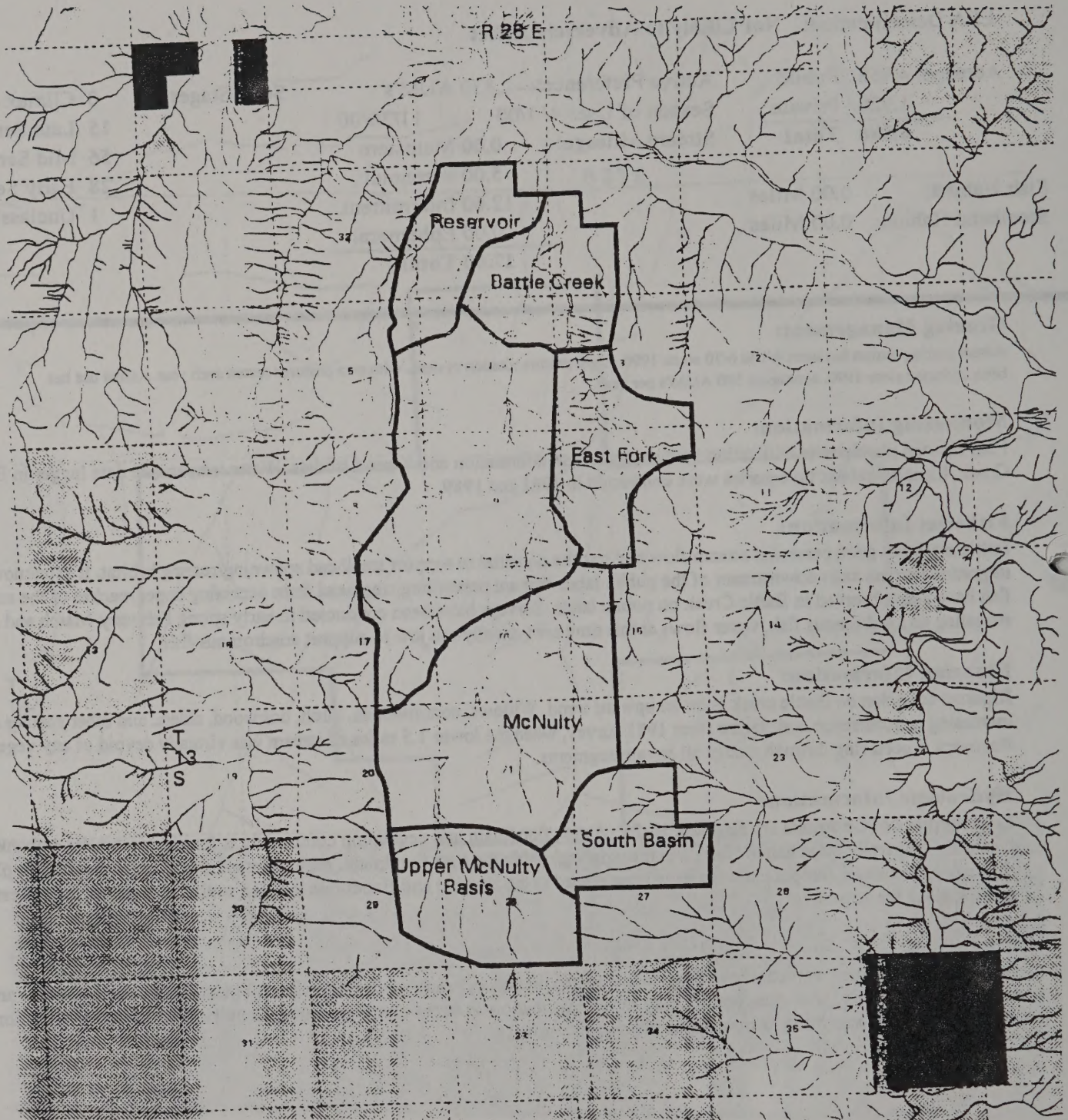
Hydrologic Information:

Large portions of the stream are downcut 10-25'. A new floodplain and vegetation community is forming within the cutbanks. Channel is generally quite narrow 2-4', and meandering within the new floodplain. High sediment loads from uplands are still sifting through the drainage. Juniper cut trees have been placed in the channel and floodplain to catch sediment and discharge livestock trailing along the stream.

Discussion:

Range/watershed improvements have been implemented, including juniper thinnings, riparian plantings, prescribed burns and spring developments. ODFW spawning/rearing map shows distribution up to the confluence with Long Hollow. Potential exists for reestablishment of spawning as riparian continues to improve.

Battle Creek Allotment #04049



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



50 JINKS CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 556 Public	Active Preference: 89 AUM's	Seral Stages: 0 Climax
5,400 Private	Season of Use: 4/ 1/00 - 11/30/00	0 Late Seral
5,956 Total	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.30 Miles	0.30 Intermittent	0 Unclassified
Steelhead Habitat: 0.30 Miles	0.00 Ephemeral	
	0.30 Total	

Grazing Management:

Permittee has been billed for 4/1 to 7/15 and 10/1 to 11/30.

Monitoring Information:

There are no monitoring studies on this allotment.

Fisheries Information:

Approximately 0.3 miles of intermittent/ephemeral drainage which is a tributary to Deer Creek which is a known steelhead habitat stream.

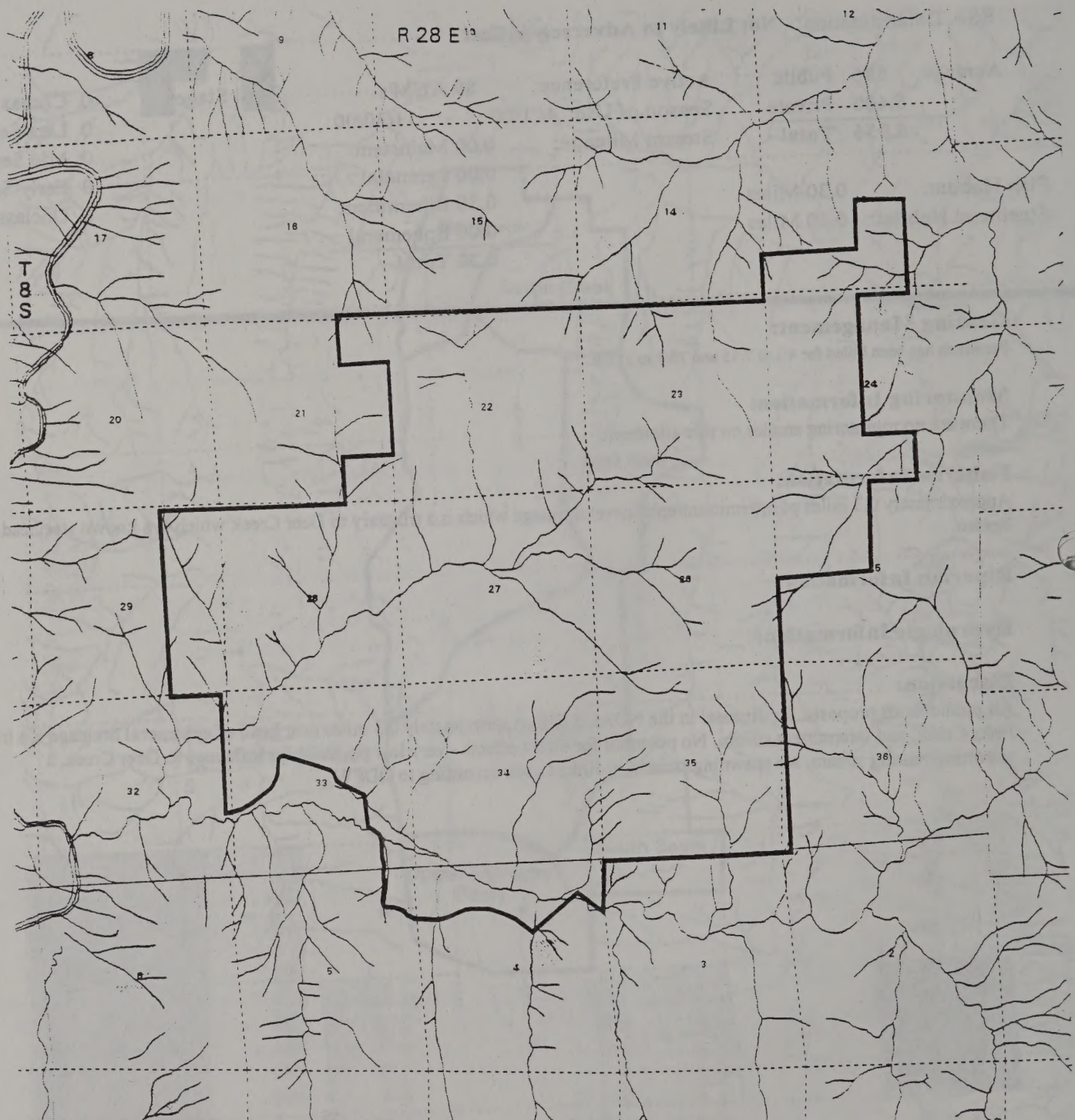
Riparian Information:

Hydrologic Information:

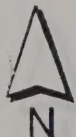
Discussion:

All public lands proposed for disposal in the NOALE EIS. Approximately 0.3 miles near head of ephemeral drainage is a tributary Jinks Creek, and intermittent stream. No potential for direct effects - very low potential for influence to Deer Creek, a spawning/rearing stream. No spawning/rearing in Jinks Creek according to ODFW.

Jinks Creek Allotment #04050



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



9 COLD SPRINGS

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 280 Public	Active Preference: 35 AUM's	Seral Stages:	0 Climax
2,800 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
<u>3,080 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.50 Perennial		0 Early Seral
Fish Habitat: 0.00 Miles	0.00 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	<u>0.00 Ephemeral</u>		
	0.50 Total		

Grazing Management:

Season of use is 4/1 to 11/30.

Monitoring Information:

Fisheries Information:

Capsuttle Creek is too steep for steelhead use (30% grade). Headwaters of Capsuttle Creek on public land.

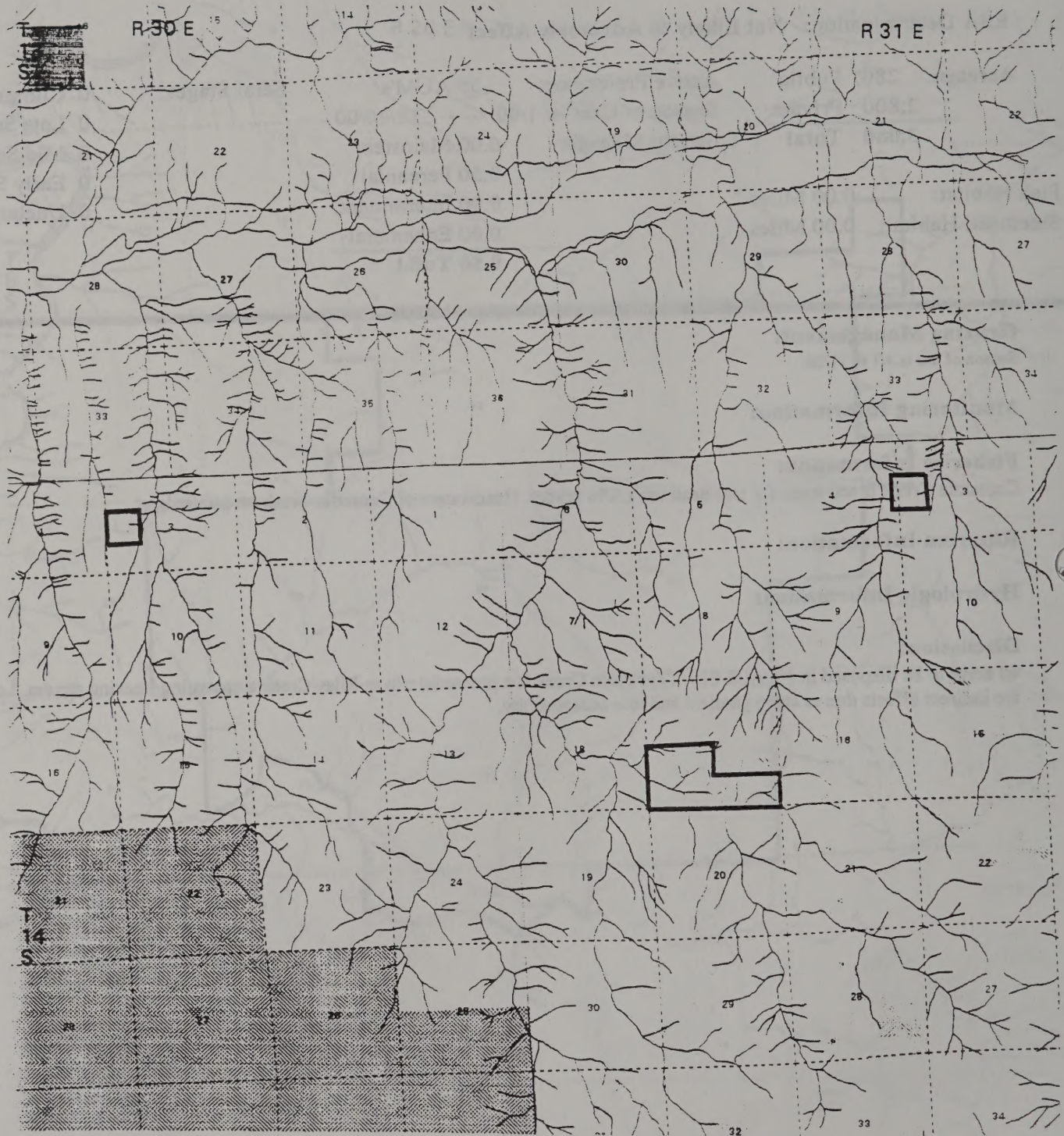
Riparian Information:

Hydrologic Information:

Discussion:

40 acres to be disposed in NOALE EIS. Capsuttle Creek is a perennial trib to Riley Creek a spawning/ rearing stream. Low potential for indirect effects due to steep gradient and low accessibility.

Cold Springs Allotment #04059



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



11 SCOTT CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,907 Public	Active Preference: 238 AUM's	Seral Stages:	0 Climax
1,880 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
3,787 Total	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.00 Perennial		0 Early Seral
Fish Habitat: 0.00 Miles	3.80 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral		
	3.80 Total		

Grazing Management:

Four pastures within the allotment. After 1994, the permittee has not had livestock on the allotment. In 1994 livestock grazed from 4/15 to 9/15.

Monitoring Information:

Actual use for 1993 (2), 1994 (299) and 1997 (1).

Fisheries Information:

None, no potential.

Riparian Information:

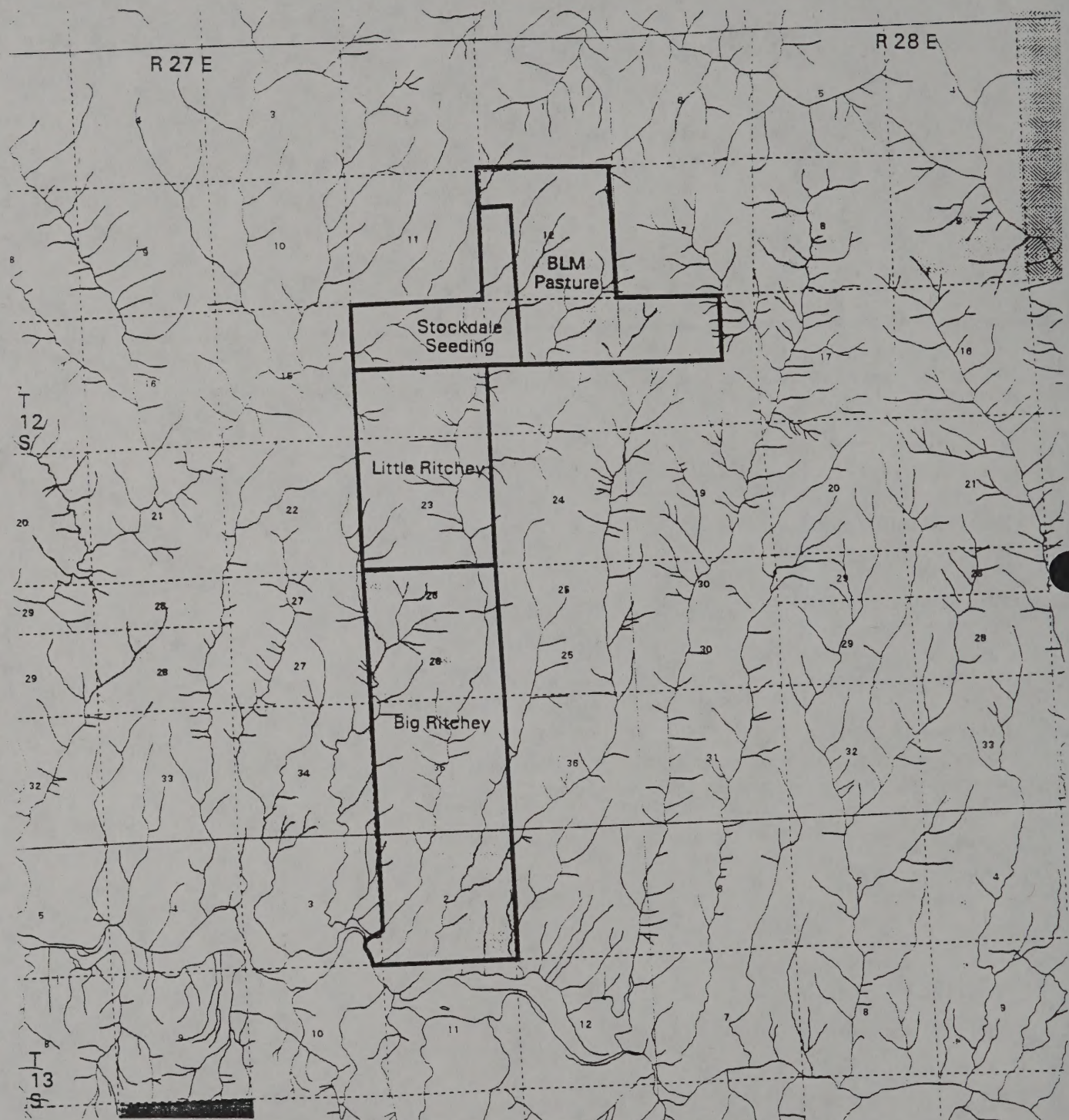
None, no potential.

Hydrologic Information:

Discussion:

All lands proposed for disposal in the NOALE EIS. Headwaters to Scotty Creek, an intermittent stream that only flows during heavy thunderstorm events. No potential for fish in Scotty Creek.

Scott Creek Allotment #04061



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



55 EAST FRANKS CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 644 Public	Active Preference: 81 AUM's	Seral Stages:	0 Climax
1,000 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
<u>1,644 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.00 Perennial		0 Early Seral
Fish Habitat: 0.00 Miles	0.80 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral		
	<u>0.80 Total</u>		

Grazing Management:

Season of use is 4/1 to 11/30.

Monitoring Information:

None.

Fisheries Information:

None, no potential.

Riparian Information:

Seasonal drainages with no riparian component.

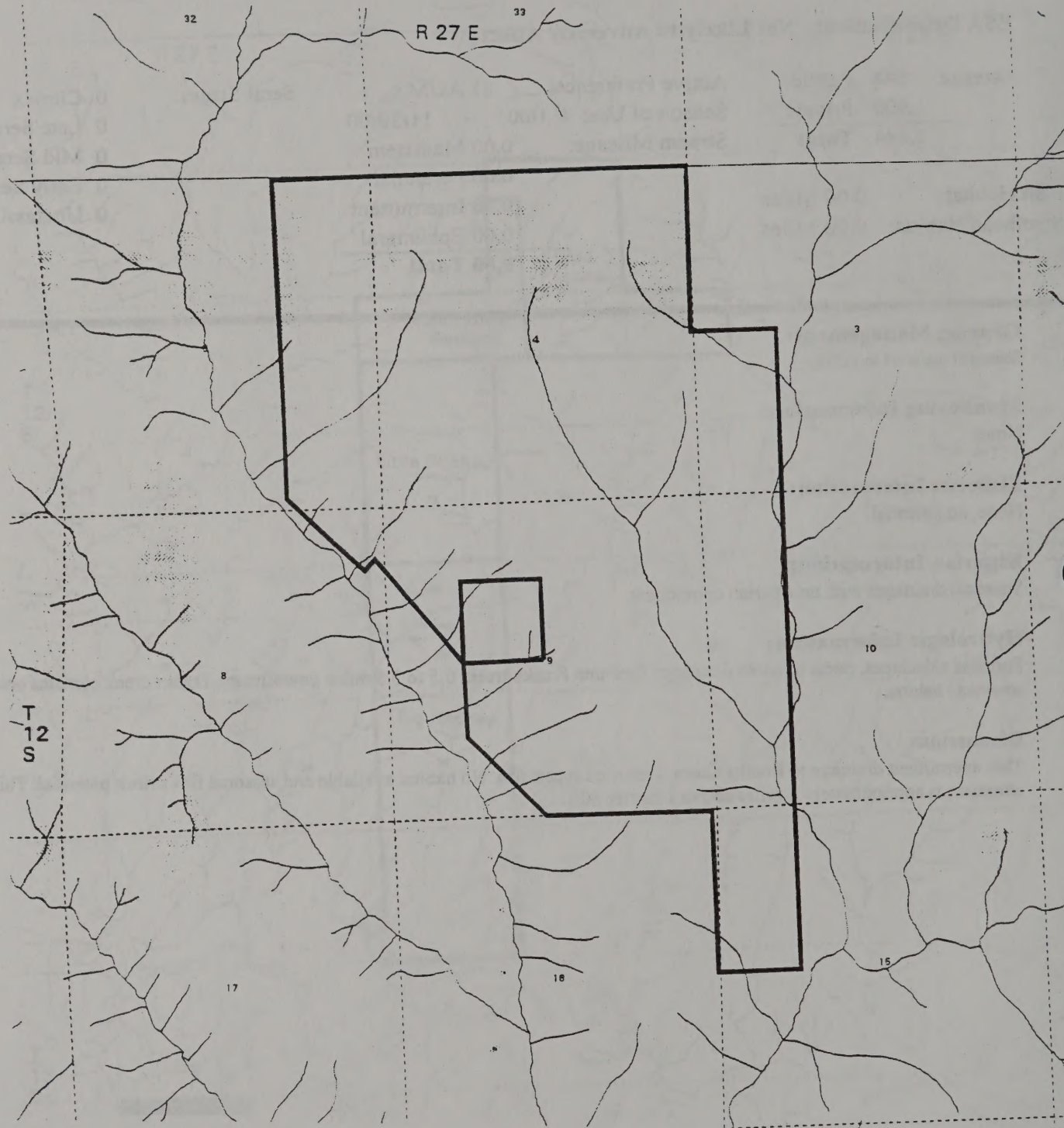
Hydrologic Information:

Forested sideslopes, north to south drainages feed into Franks creek, 0.5 to 2.5 miles downstream. Franks creek contains occupied steelhead habitat.

Discussion:

This intermittent drainage to Franks Creek does not support fish. No habitat available and seasonal flows limit potential. This allotment is approximately 3 miles above a barrier falls.

East Franks Creek Allotment #04065



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



56 KIDD CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1.483 Public	Active Preference: 185 AUM's	Seral Stages:	0 Climax
5,323 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
<u>6,806 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.00 Perennial		0 Early Seral
Fish Habitat: 0.00 Miles	5.00 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	<u>0.00 Ephemeral</u>		
	5.00 Total		

Grazing Management:

Season of use is 4/1 to 11/30.

Monitoring Information:

Fisheries Information:

Ephemeral draws only on allotment with no fisheries potential. Public parcels are upland in nature.

Riparian Information:

Small spring area with no riparian.

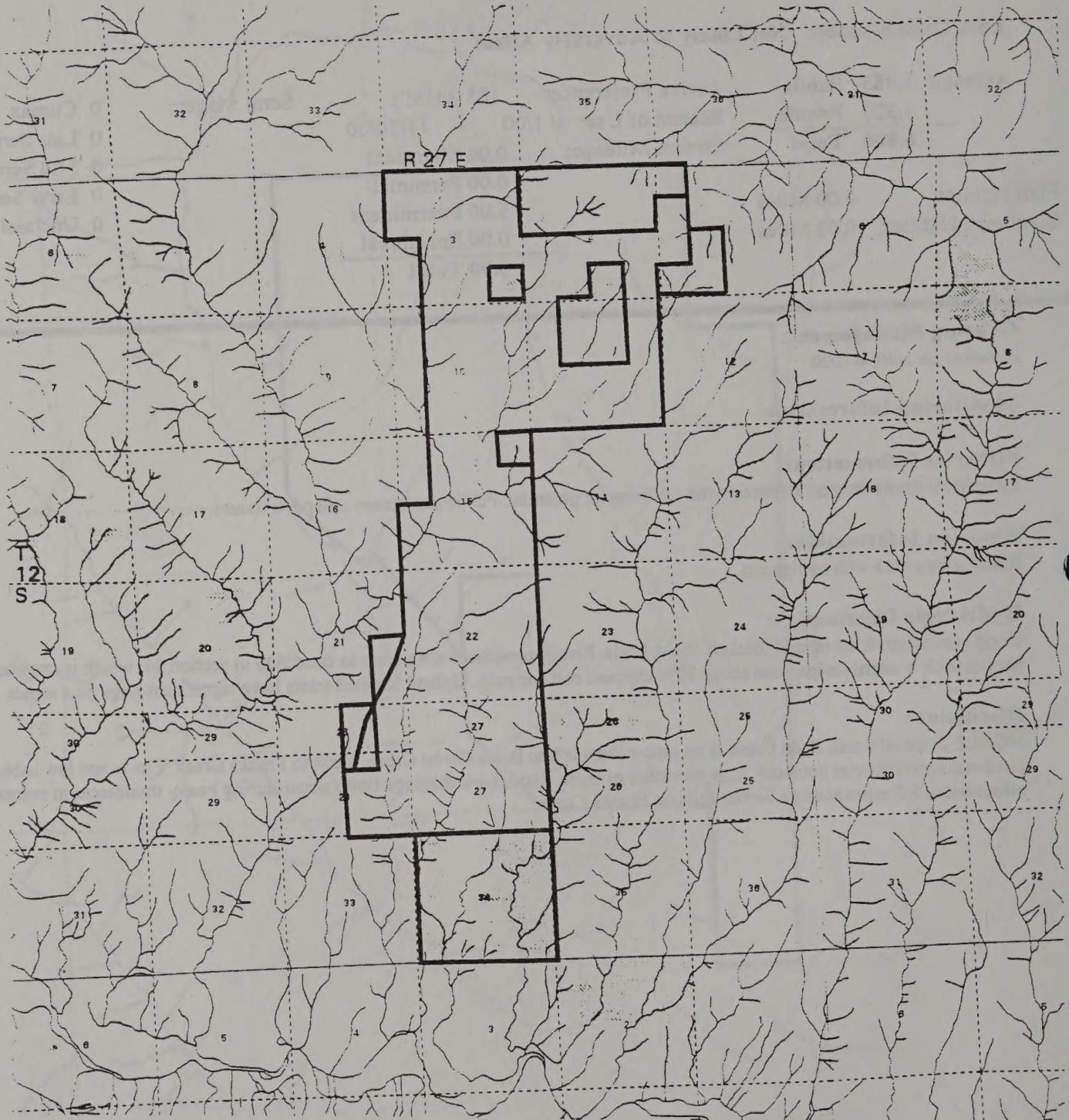
Hydrologic Information:

Good ground cover on upland forested BLM lands. Forage conditions are poorer in condition in section 34, which is rangeland habitat with western juniper, and about 30% exposed soil and rock. Upland forested tracts have significant large pine stands.

Discussion:

NOALE disposal tracts. Kidd Creek is an intermittent trib to Burnt Corral Creek, a trib to Franks Creek. Flows and low habitat potential limit fisheries potential. Low elevation of these intermittent drainage flows occur during heavy thunderstorm events. This allotment is 2.5 miles above a barrier falls on Franks Creek.

Kidd Creek Allotment #04066



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



57 SHEEP CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 2,876 Public	Active Preference: 576 AUM's	Seral Stages:	0 Climax
14,400 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
<u>17,276 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	2.00 Perennial		0 Early Seral
Fish Habitat: 0.00 Miles	3.00 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	<u>0.00 Ephemeral</u>		
	5.00 Total		

Grazing Management:

The ranch has several pastures which livestock are rotated through. no information on actual use.

Monitoring Information:

None.

Fisheries Information:

The SFJDR, Flat Creek and Delles Creek all support redband trout habitat.

Riparian Information:

Pole Canyon 0.3, SFJDR 0.1, Flat Creek 0.3, Delles Creek 0.5. Riparian condition of Flat Creek (0.3 miles) is fair, canopy cover is only 5-10% over the stream. Riparian shrubs and willows are patchy. Delles Creek has moderate to good riparian vegetation component with chokcherry, willow and alder. Lush grass in the creek bottom is 10 yards wide. Red top, sedges and bluegrass dominate. No information on the condition of the SFJDR riparian.

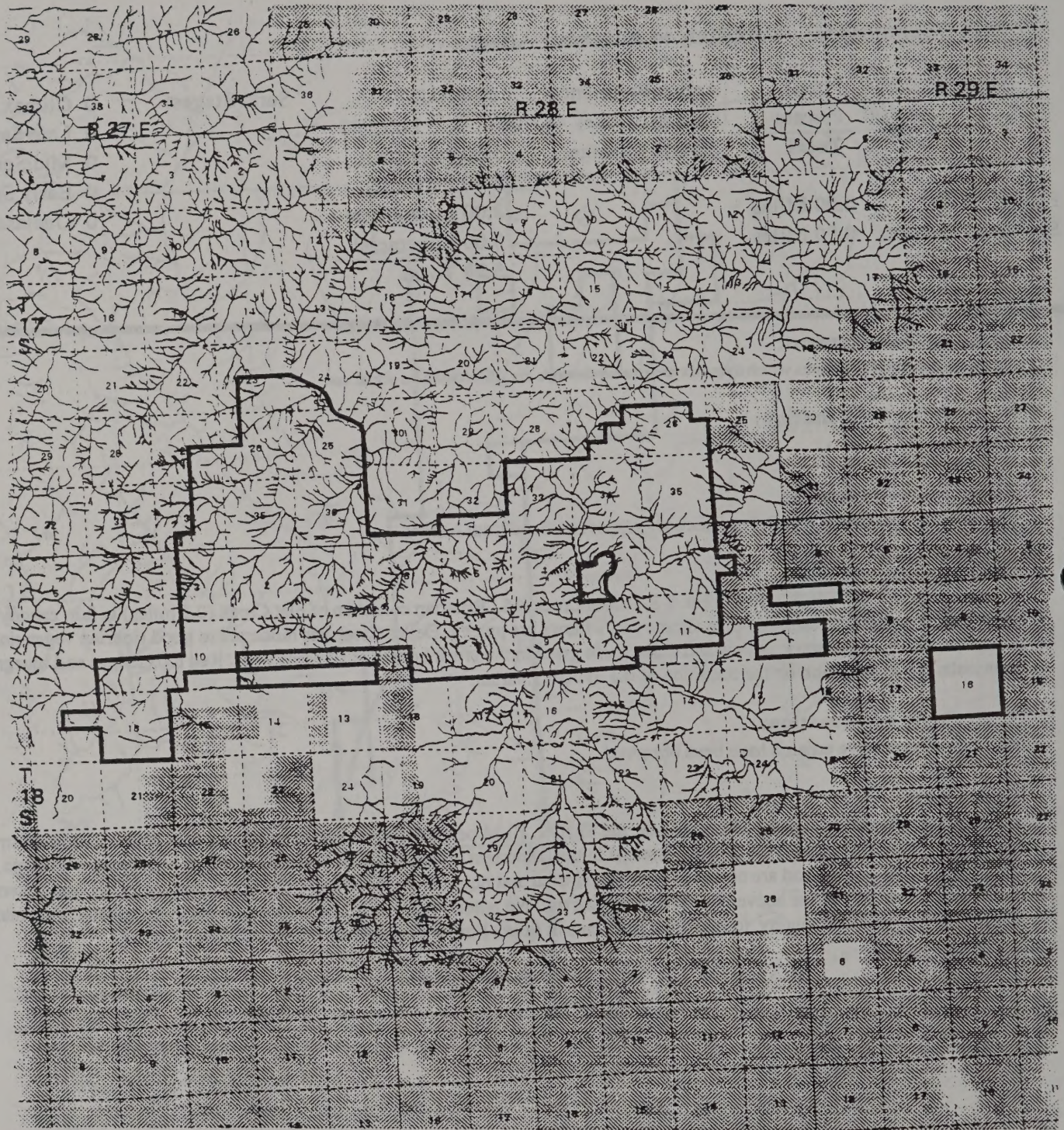
Hydrologic Information:

No areas of excessive erosion have been observed.

Discussion:

All NOALE disposal except for 560 acres near the SFJDR. BLM perennial stream segments are 11-18 riverine miles upstream of occupied steelhead habitat in the SFJDR. Streams in this allotment are upstream of a natural barrier to steelhead trout (Izee Falls on the SF John Day River), and are occupied by redband trout and non-game species only. These streams are in the headwaters of the South Fork John Day River above Izee falls, a fish barrier. No potential for steelhead but they do support redband. Potential for indirect effects of water quality, to spawning segments in South Fork approximately 15 miles downstream.

Sheep Creek Butte Allotment #04067



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



68 SHEEP GULCH

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 3,499 Public	Active Preference: 292 AUM's	Seral Stages: 0 Climax
2,200 Private	Season of Use: 4/15/00 - 7/15/00	20 Late Seral
<u>5,699 Total</u>	Stream Mileage: 0.00 Mainstem	22 Mid Seral
	2.00 Perennial	38 Early Seral
Fish Habitat: 0.00 Miles	13.00 Intermittent	20 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>15.00 Total</u>	

Grazing Management:

Livestock are rotated through four pastures. Actual use has ranged from 10-344 AUM's between 1988 and 1995, averaging 171 AUM's for 8 years of reported use.

Monitoring Information:

Utilization studies, and two trend studies.

Fisheries Information:

Sheep Gulch does not support any fish habitat according to ODF&W inventory information.

Riparian Information:

Small patches of riparian species along Sheep Gulch.

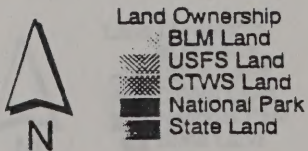
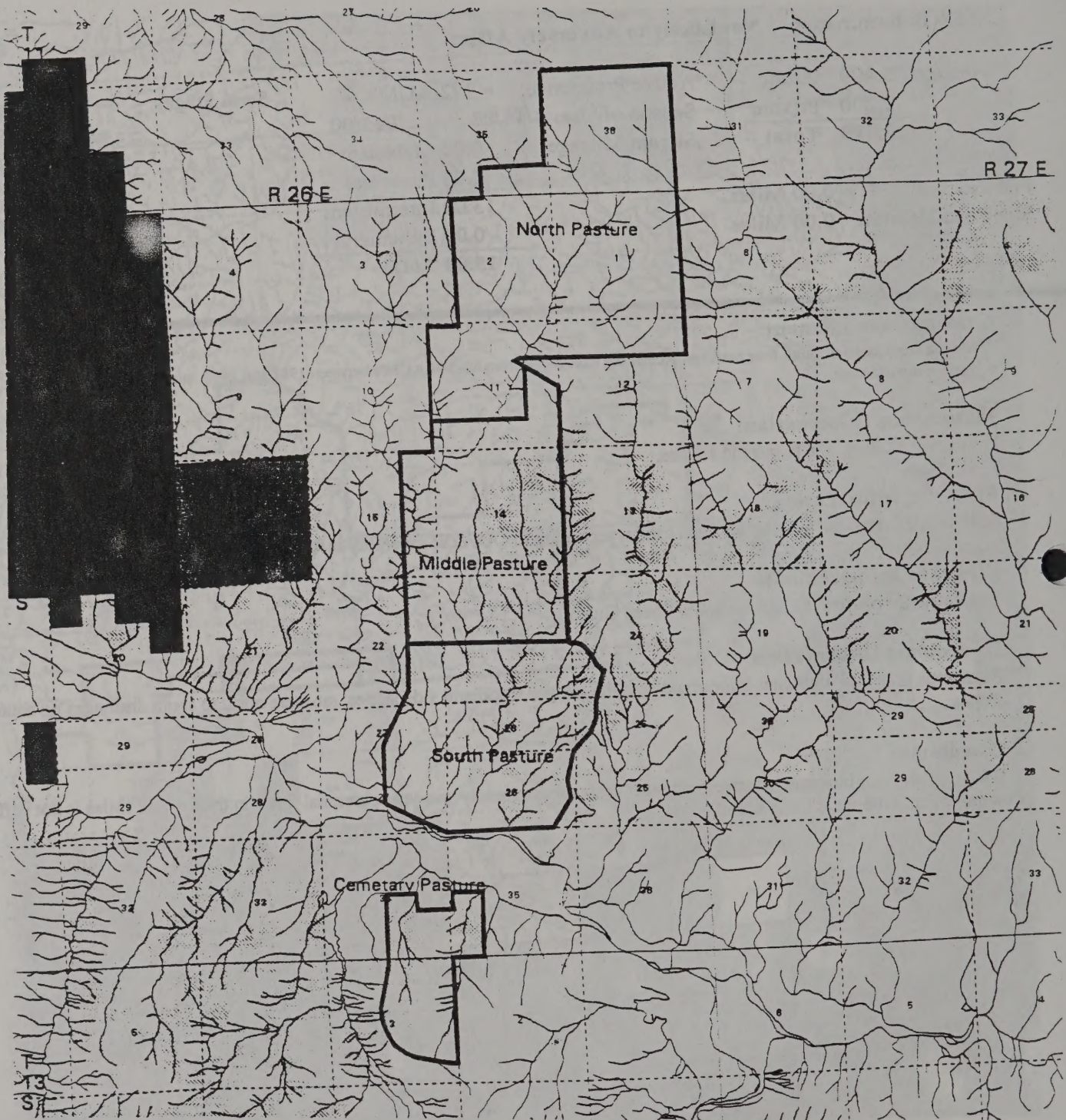
Hydrologic Information:

Numerous seasonal drainages intermixed with the juniper woodland side slopes. most are north to south drainages on south facing slopes.

Discussion:

Sheep gulch is an intermittent stream on most years. occassionally wet year perennial flows in the lower 2 miles is not sufficient to support fish. Habitat is not present.

Sheep Gulch Allotment #04068



59 BIG SPRINGS

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 107 Public	Active Preference: 17 AUM's	Seral Stages: 0 Climax
1,420 Private	Season of Use: 4/ 1/00 - 9/20/00	0 Late Seral
1,527 Total	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.40 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	0.40 Total	

Grazing Management:

Season of use is 4/1 to 9/20.

Monitoring Information:

None.

Fisheries Information:

None, no potential.

Riparian Information:

Seasonal drainage does not support riparian species.

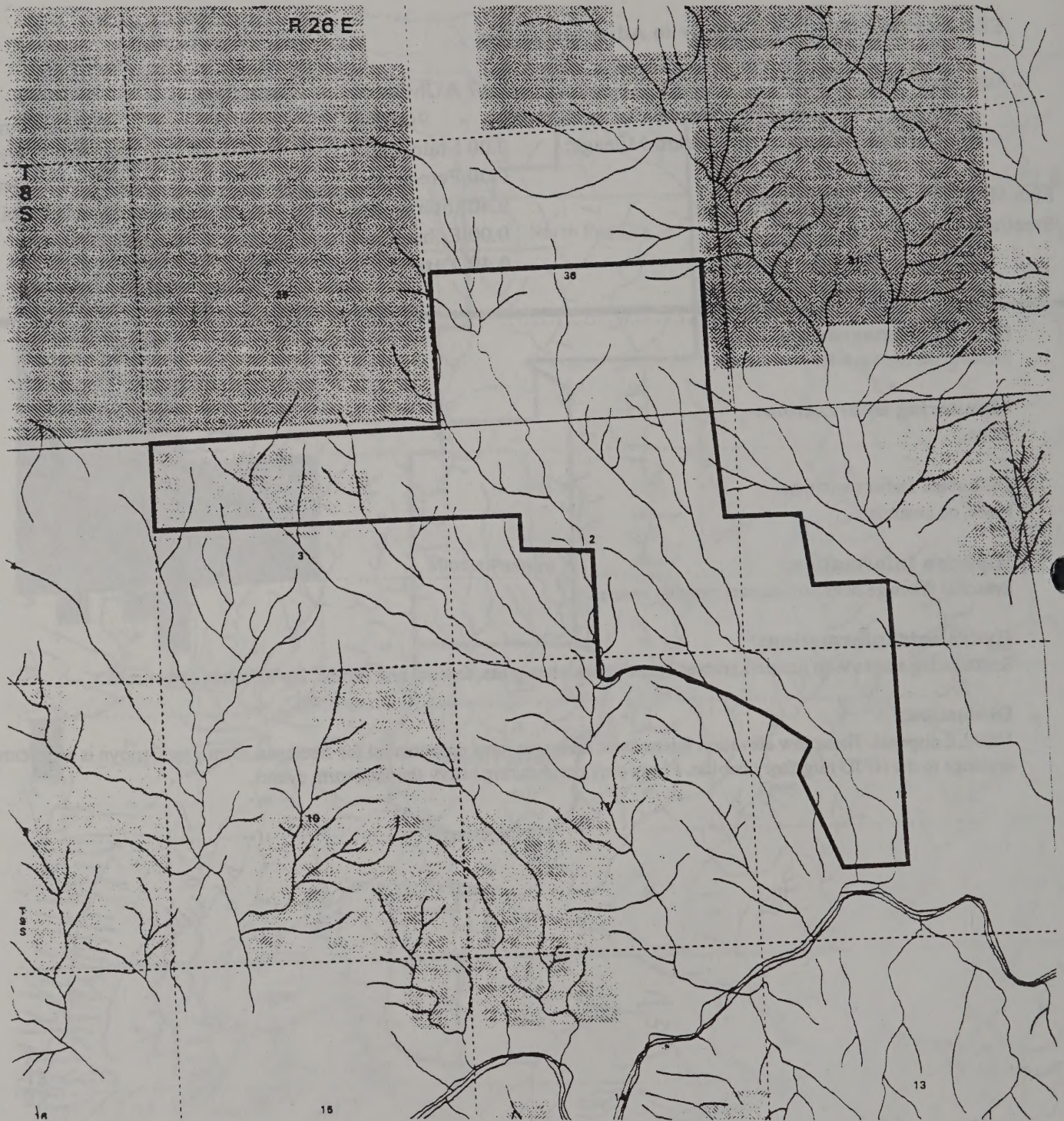
Hydrologic Information:

South facing slopes with juniper, grasses (bunchgrass, cheatgrass, fescue) and shrubs, 20-40% bare soil or rock.

Discussion:

NOALE disposal. These low elevation intermittent drainages have no potential for steelhead. Portugese Canoyrn is an intermittent drainage to the NFJD migratory habitat. Flows only occur during heavy thunderstorm events.

Big Springs Allotment #04069



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



74 MCCARTY CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 867 Public	Active Preference: 105 AUM's	Seral Stages:	0 Climax
162 Private	Season of Use: 4/ 1/00 - 7/31/00		0 Late Seral
<u>1,029 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	1.70 Perennial		0 Early Seral
Fish Habitat: 0.00 Miles	1.60 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	<u>0.00 Ephemeral</u>		
	3.30 Total		

Grazing Management:

Two pastures : Bull Canyon - west of Highway grazed 4/1-5/31 and Branson pasture - east of highway, grazed 4/15-7/31.

Monitoring Information:

No established monitoring studies.

Fisheries Information:

Branson Creek is a perennial stream, containing potential steelhead habitat. No known steelhead use.

Riparian Information:

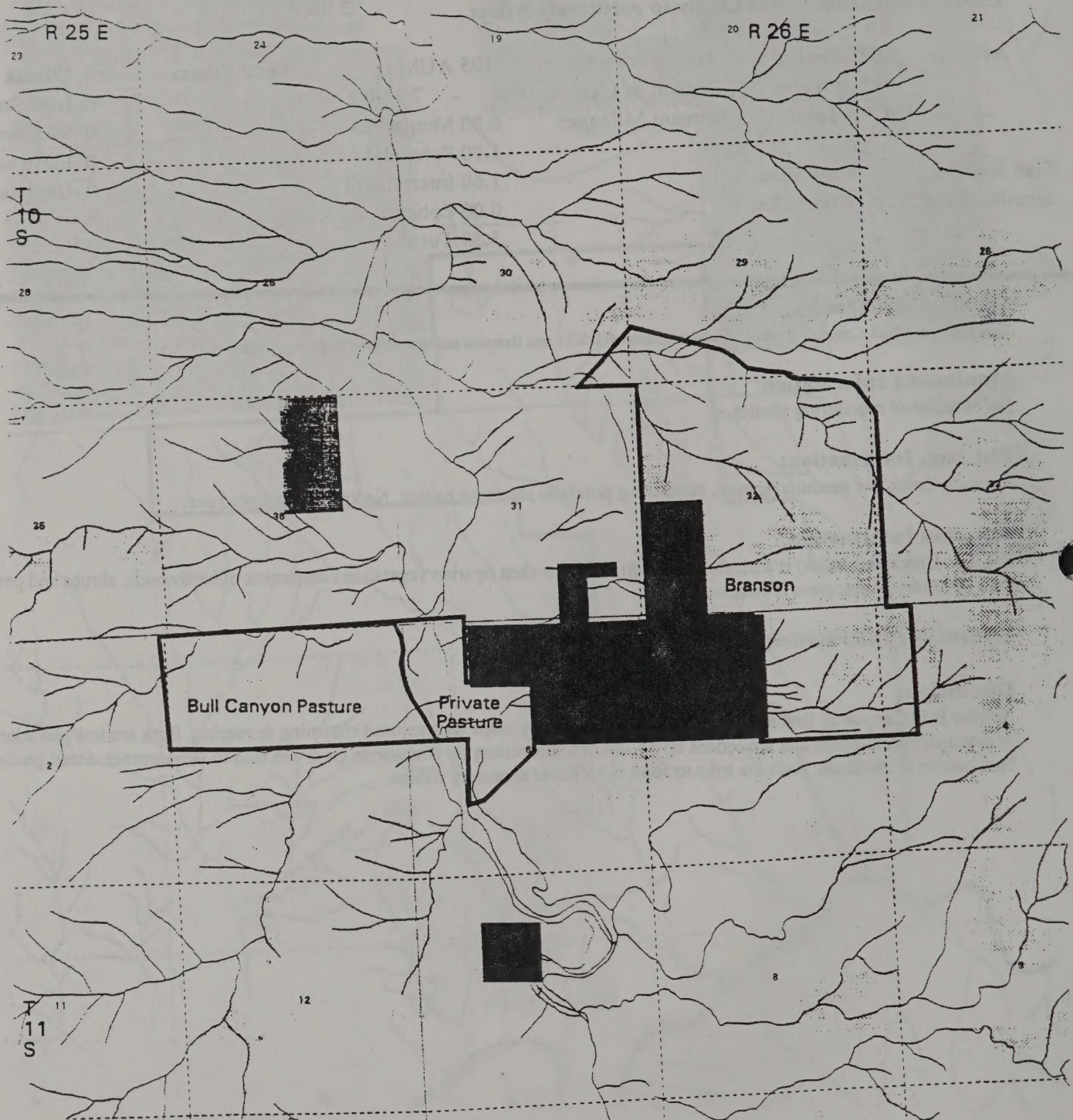
Branson Creek (1.1 miles) is a perennial stream with a modest riparian vegetation component of hardwoods, shrubs and ponderosa pine overstory, water cress is common.

Hydrologic Information:

Discussion:

Neither Bull Canyon or Branson Creek are listed on ODFW maps for steelhead spawning or rearing. Both are low elevation subject to seasonal precipitation that influences flows. It's not uncommon for Branson to go dry in mid to late summer. Steep gradient would be a barrier to steelhead. Both are tributaries to John DAY River migratory habitat.

McCarty Creek Allotment #04074



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



77 MOON MOUNTAIN

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 240 Public	Active Preference: 30 AUM's	Seral Stages: 0 Climax
3,040 Private	Season of Use: 4/ 1/00 - 11/30/00	0 Late Seral
3,280 Total	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.10 Perennial	0 Early Seral
Fish Habitat: 0.10 Miles	0.20 Intermittent	0 Unclassified
Steelhead Habitat: 0.10 Miles	0.00 Ephemeral	
	0.30 Total	

Grazing Management:

Grazing use occurs for one month between 5/1 - 7/1 on T14S, R29E Sec 11 SE1/4NE1/4 (McClellan Creek)

Monitoring Information:

None.

Fisheries Information:

This section of McClellan creek is spawning/rearing habitat for steelhead/redband trout, westslope cutthroat trout.

Riparian Information:

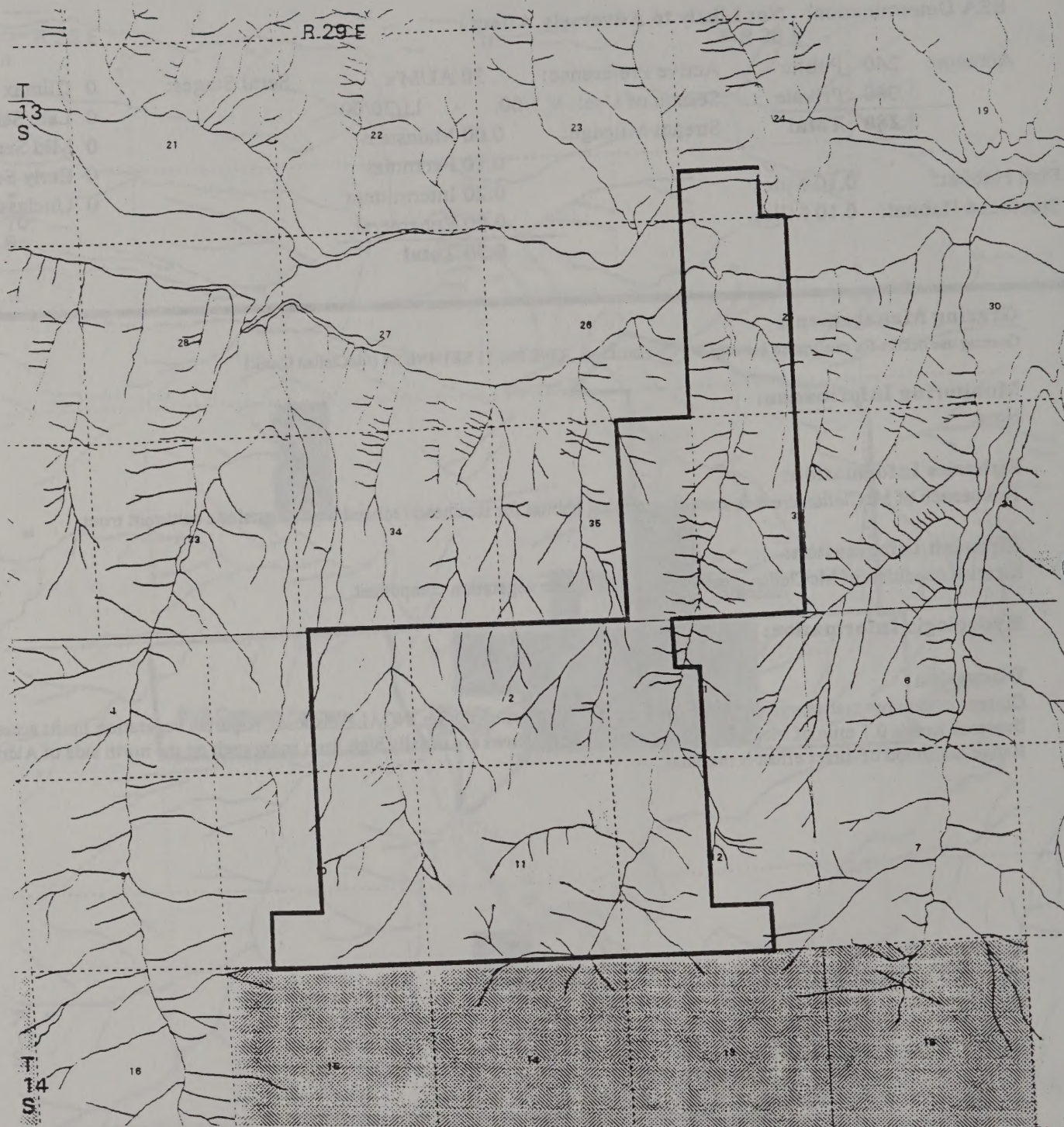
Riparian condition of McClellan creek is good with dense vegetation component.

Hydrologic Information:

Discussion:

Current landowner management has kept riparian area in good condition. NOALE disposal. Riparian vegetation limits access by livestock to this 0.1 mile of McClellan Creek. Early season flows are usually high from snow melt on the north side of Aldrich Mt. Range. likelihood of direct effect is minimal.

Moon Mountain Allotment #04077



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



78 GIBSON HILL

ESA Determination: **Not Likely to Adversely Affect**

Acreage:	40 Public	Active Preference:	8 AUM's	Seral Stages:	0 Climax
	0 Private	Season of Use:	4/ 1/00 - 11/30/00		0 Late Seral
	40 Total	Stream Mileage:	0.00 Mainstem		0 Mid Seral
			0.00 Perennial		0 Early Seral
Fish Habitat:	0.00 Miles		0.20 Intermittent		0 Unclassified
Steelhead Habitat:	0.00 Miles		0.00 Ephemeral		
			0.20 Total		

Grazing Management:

Season of use is 4/1 to 11/30.

Monitoring Information:

None.

Fisheries Information:

No fisheries potential. Public land is upland in nature with one ephemeral draw.

Riparian Information:

No information.

Hydrologic Information:

Intermittant drainage 0.2 riverine miles upstream of Beech creek, an anadromous fish stream.

Discussion:

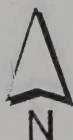
NOALE disposal. This 40 acre parcel is upland in nature with an intermittent drainage approximately 0.2 miles long. Tributary to Beech Creek which is spawning and rearing habitat for steelhead and redband trout.

Gibson Hill Allotment #04078

R 31 E

T
13
S

Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



ESA Determination: **Not Likely to Adversely Affect**

Acreage: 160 Public	Active Preference: 26 AUM's	Seral Stages:	0 Climax
660 Private	Season of Use: 4/ 1/00 - 5/31/00		0 Late Seral
<u>820 Total</u>	Stream Mileage: 0.60 Mainstem		0 Mid Seral
	0.60 Perennial		0 Early Seral
Fish Habitat: 0.60 Miles	0.40 Intermittent		0 Unclassified
Steelhead Habitat: 0.60 Miles	0.00 Ephemeral		
	<u>1.00 Total</u>		

Grazing Management:

Spring grazing treatment. Since 1993 the permittee has not grazed the allotment.

Monitoring Information:

None.

Fisheries Information:

This section of the NFJDR supports juvenile steelhead winter rearing habitat. Other fish species present are smallmouth bass, squawfish, suckers, dace and minnows.

Riparian Information:

Riparian habitat condition has improved since 1981 inventory. Riparian conditions showing recovery in sedges along riverbanks a moderate increases in willows and shrubs.

Hydrologic Information:

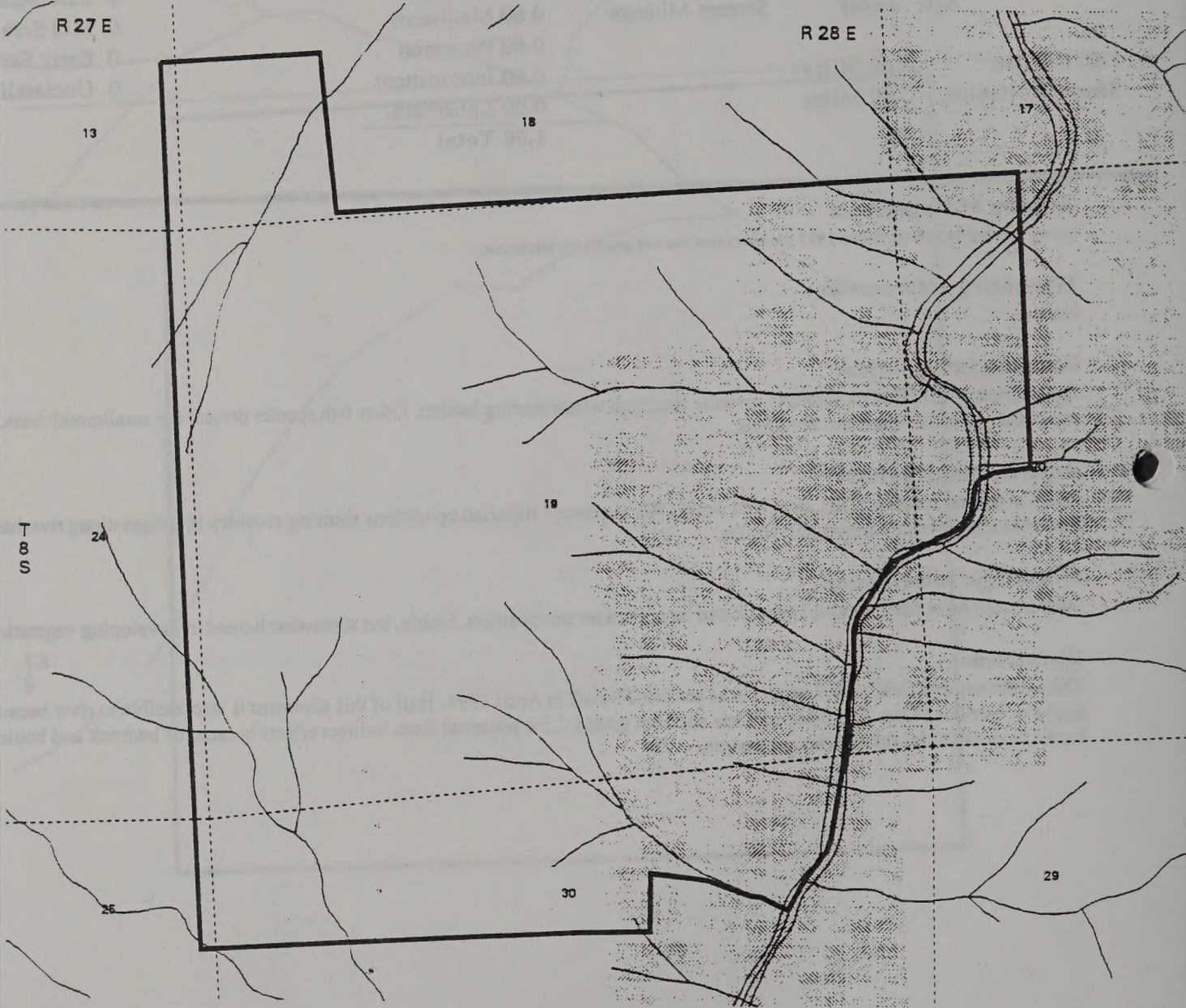
Streambanks have considerable bedrock and large boulder composition. Stable, but somewhat limited in developing vegetation.

Discussion:

This allotment was field reviewed by BLM and NMFS staff in April 1994. Half of this allotment is inaccessible to river because of highway corridor fence. The other half has not been grazed. Low potential from indirect effects because of bedrock and boulder banks. Low potential for riparian vegetation.

Gibson Hill
Allotment #04073

19 20
Allotment #04083



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



6 RUDIO MTN.

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 3.860 Public
1,600 Private
5,460 Total

Active Preference: 590 AUM's
Season of Use: 7/ 1/00 - 10/15/00
Stream Mileage: 0.00 Mainstem
1.40 Perennial
3.40 Intermittent
0.00 Ephemeral
4.80 Total

Seral Stages: 0 Climax
47 Late Seral
50 Mid Seral
1 Early Seral
2 Unclassified

Fish Habitat: 0.00 Miles
Steelhead Habitat: 0.00 Miles

Grazing Management:

Livestock are rotated between two pastures. Two permittees graze livestock in the allotment. A riparian area on Johnny Creek is steep, and in narrow canyon. Probably inaccessible by livestock.

Monitoring Information:

Utilization studies, three trend studies, and actual use information. Actual use information for 1971, 77-78, 84-90, 92-94, 96-97. Average actual use for the years 1990-1997 is 245 AUM's.

Fisheries Information:

Johnny Creek likely is too steep (12%) for steelhead trout use.

Riparian Information:

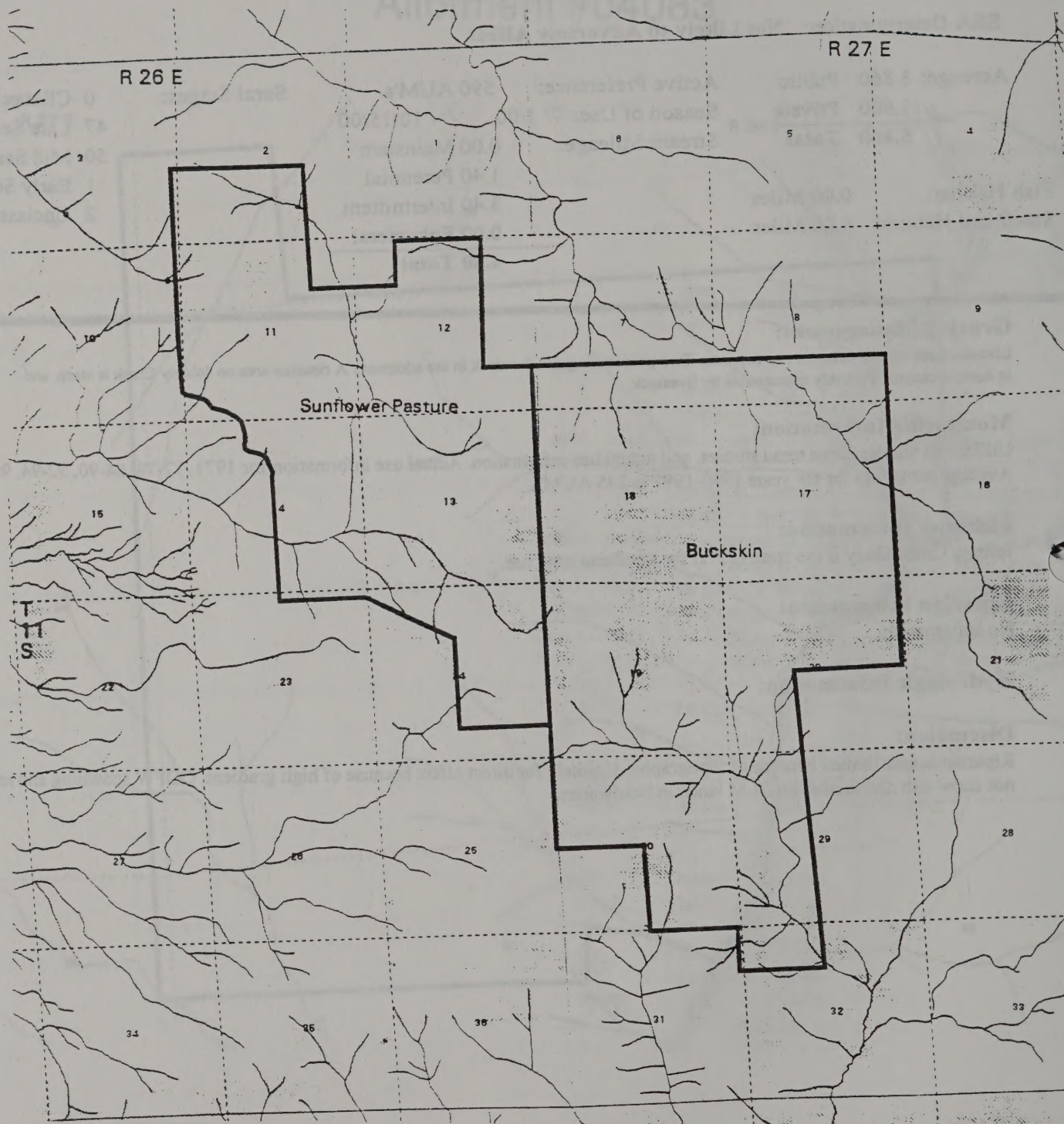
No Information.

Hydrologic Information:

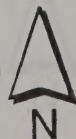
Discussion:

Riparian access limited because of topography. Unlikely for direct effect because of high gradient. ODFW spawning and rearing do not show fish distribution on BLM lands in headwaters.

Rudio Mountain Allotment #04086



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



'87 BLUE BASIN

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,000 Public	Active Preference: 220 AUM's	Seral Stages: 0 Climax
1,300 Private	Season of Use: 4/ 1/00 - 11/30/00	0 Late Seral
<u>2,300 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.60 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>0.60 Total</u>	

Grazing Management:

Since 1994 the allotment has been used in conjunction with the Rudio Mountain Allotment. Use has been 4/1 to 6/30 and 10/15 to 11/30. Actual use in 1992 was 39 AUM's and 64 AUM's in 1994.

Monitoring Information:

Utilization studies and one trend study.

Fisheries Information:

No fisheries potential. Public land is upland in nature with an ephemeral draw.

Riparian Information:

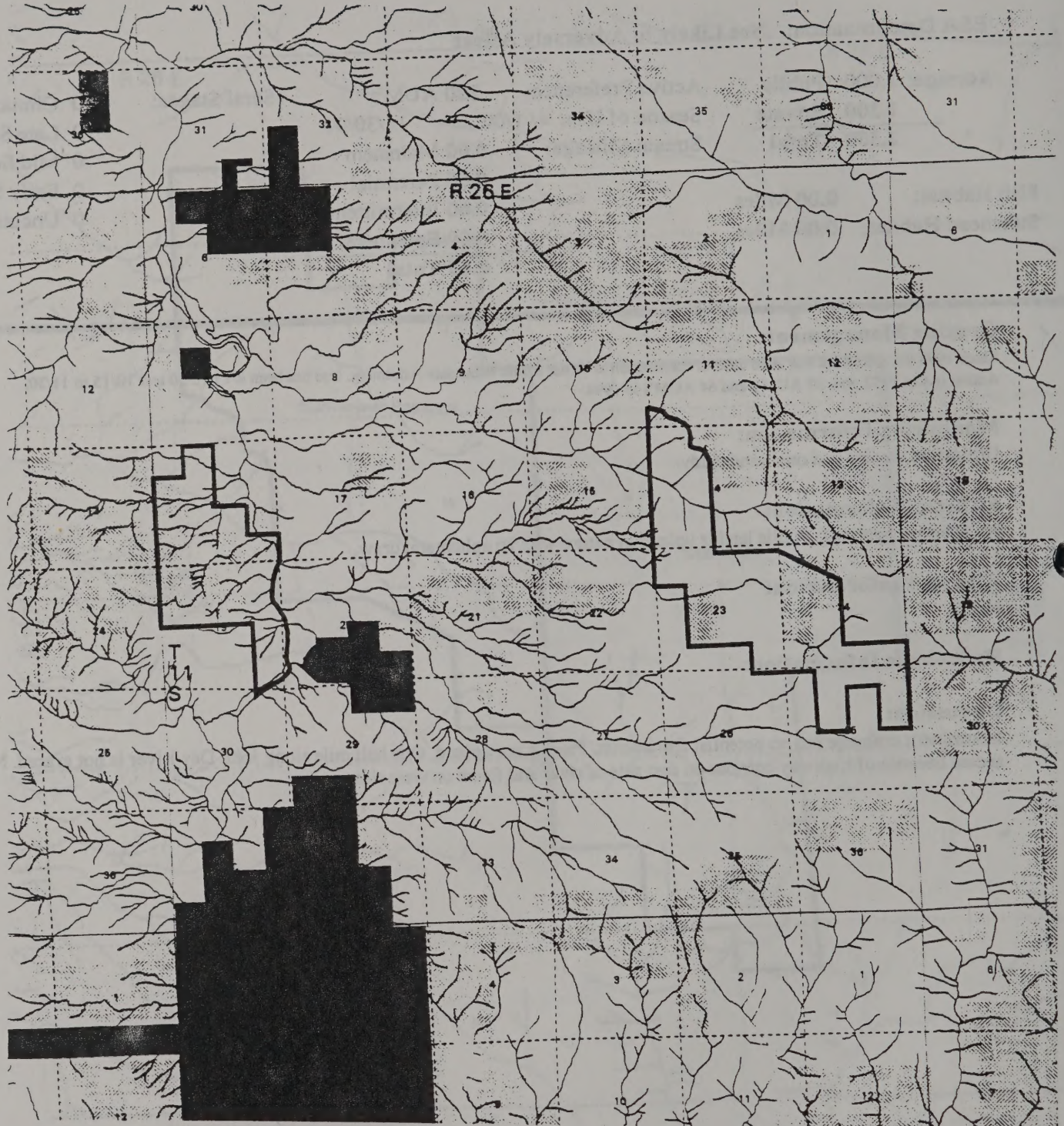
None.

Hydrologic Information:

Discussion:

Intermittent drainage has no potential fish habitat. Parcels are upland. One half mile along John Day River is not grazed. No livestock access because of highway corridor on east side of river and fence on west side.

Blue Basin Allotment #04087



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



992 LITTLE BEACH

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 360 Public	Active Preference: 45 AUM's	Seral Stages: 0 Climax
7,000 Private	Season of Use: 4/ 1/00 - 11/30/00	0 Late Seral
7,360 Total	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.60 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	0.60 Total	

Grazing Management:

Season of use is 4/1 to 11/30.

Monitoring Information:

None.

Fisheries Information:

No fisheries potential. All public land is upland in nature with one ephemeral draw.

Riparian Information:

None.

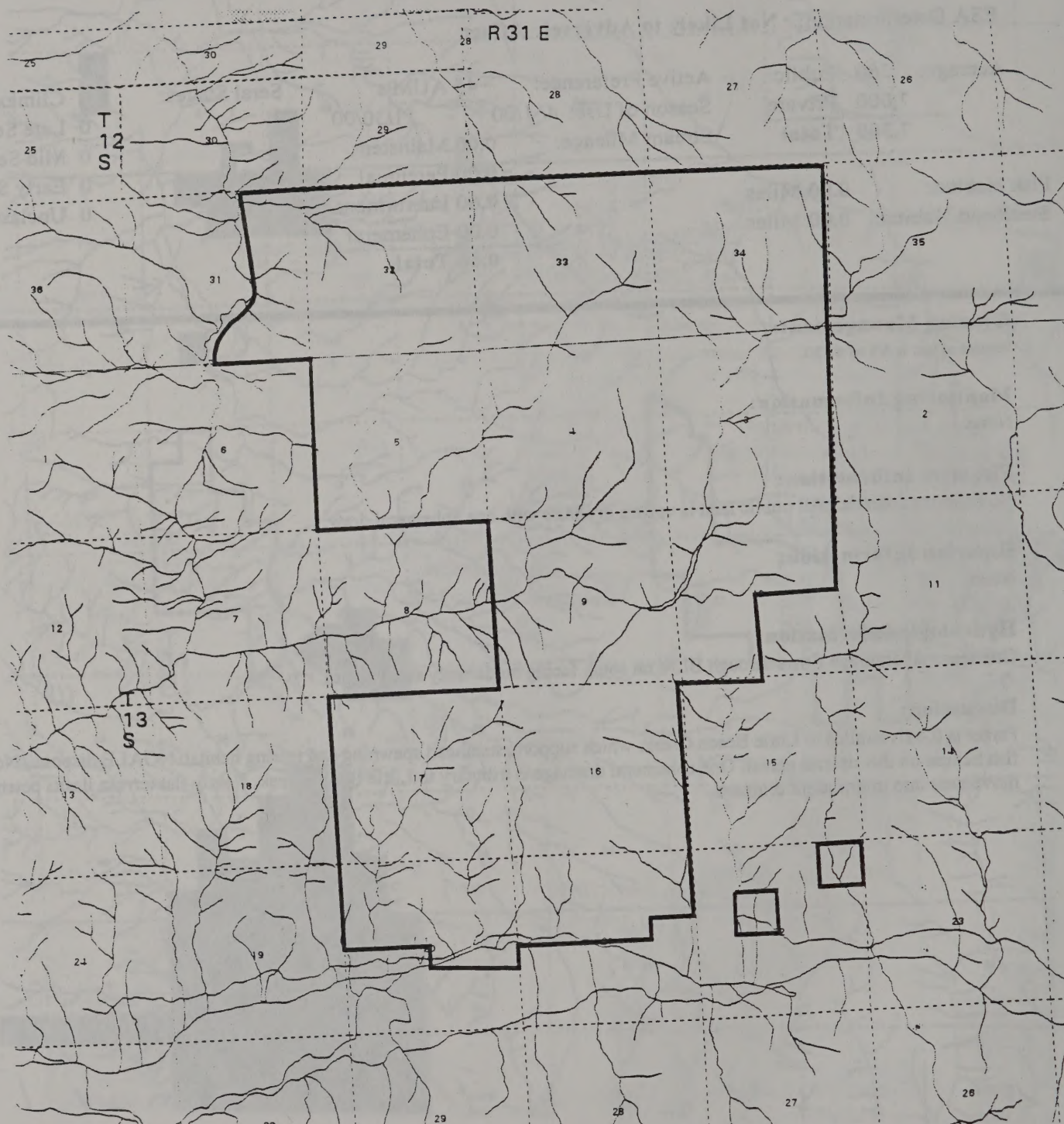
Hydrologic Information:

One seasonal drainage flows through BLM on south facing moderately steep slopes.

Discussion:

Parcel is 0.4 river miles to Little Beech Creek, which supports steelhead spawning and rearing habitat. NOALE disposal. No potential fish habitat on this upland parcel. One ephemeral drainage is tributary to Little Beech Creek. Nearly flat terrain limits potential of movement into intermittent drainage.

Little Beach Allotment #04092



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



94 DRY CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 120 Public	Active Preference: 25 AUM's	Seral Stages: 0 Climax
340 Private	Season of Use: 4/ 1/00 - 11/30/00	0 Late Seral
<u>460 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.20 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>0.20 Total</u>	

Grazing Management:

Season of use is 4/1 to 11/30.

Monitoring Information:

None.

Fisheries Information:

No fisheries potential. All public lands are upland in nature with an ephemeral draw.

Riparian Information:

None.

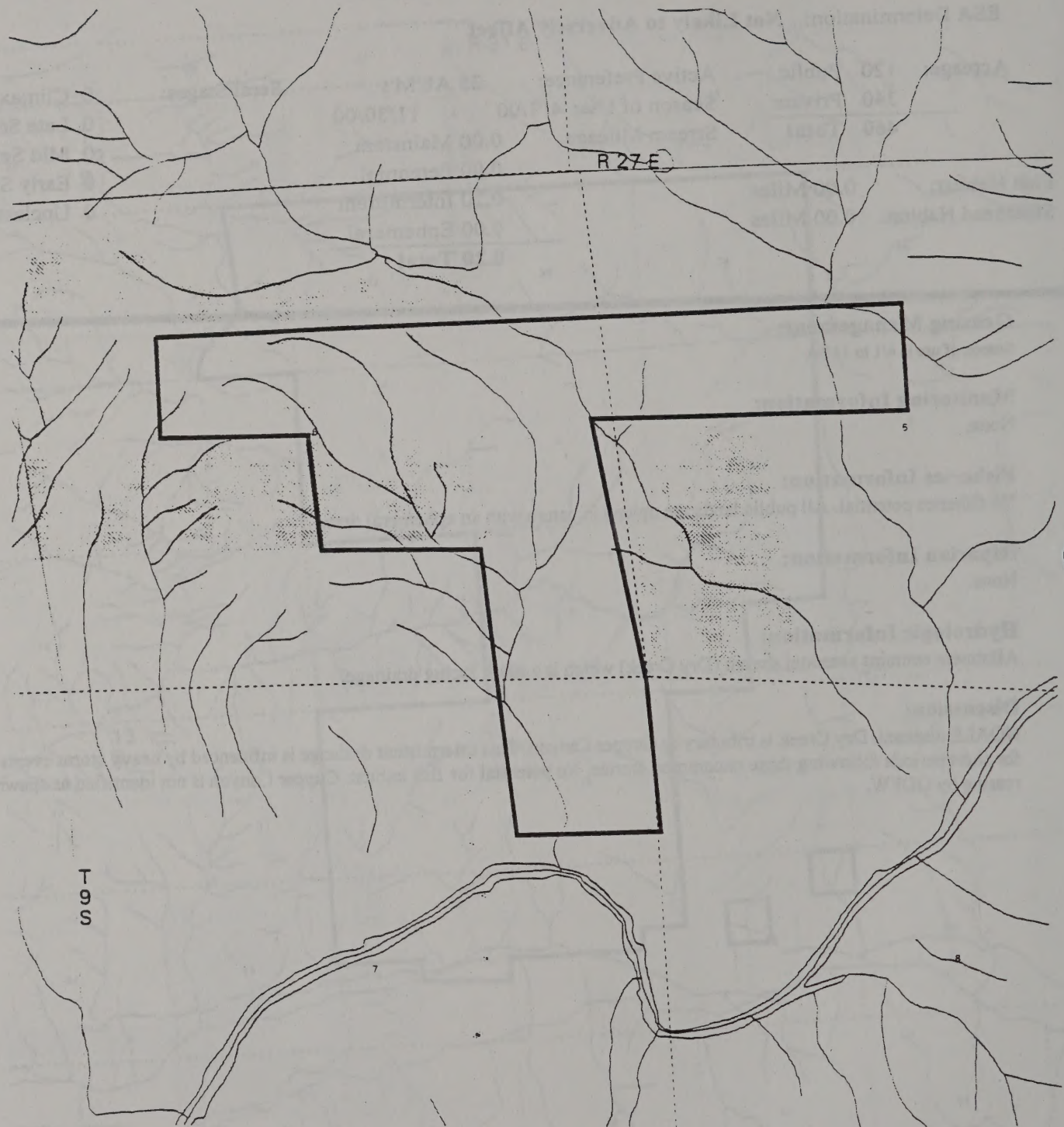
Hydrologic Information:

Allotment contains seasonal stream (Dry Creek) which is a south facing drainage.

Discussion:

NOALE disposal. Dry Creek is tributary to Copper Canyon. This intermittent drainage is influenced by heavy storm events and runs for short periods following these uncommon storms. No potential for fish habitat. Copper Canyon is not identified as spawning and rearing by ODFW.

Dry Creek Allotment #04094



T 9 S

Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



15 FIELDS CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,092 Public	Active Preference: 214 AUM's	Seral Stages:	0 Climax
3,350 Private	Season of Use: 6/ 1/00 - 9/15/00		0 Late Seral
<u>4,442 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.40 Perennial		0 Early Seral
Fish Habitat: 0.00 Miles	2.50 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral		
	<u>2.90 Total</u>		

Grazing Management:

No information on actual use. Good forage ground cover but a little sparse in areas. Forest understory areas dominated by elk sedge, bunchgrass, cheatgrass, and Sandburgs bluegrass. Non forested understory areas dominated by bluebunch wheatgrass, Idaho fescue, cheatgrass and Thurbers needlegrass.

Monitoring Information:

None.

Fisheries Information:

No fisheries potential.

Riparian Information:

None.

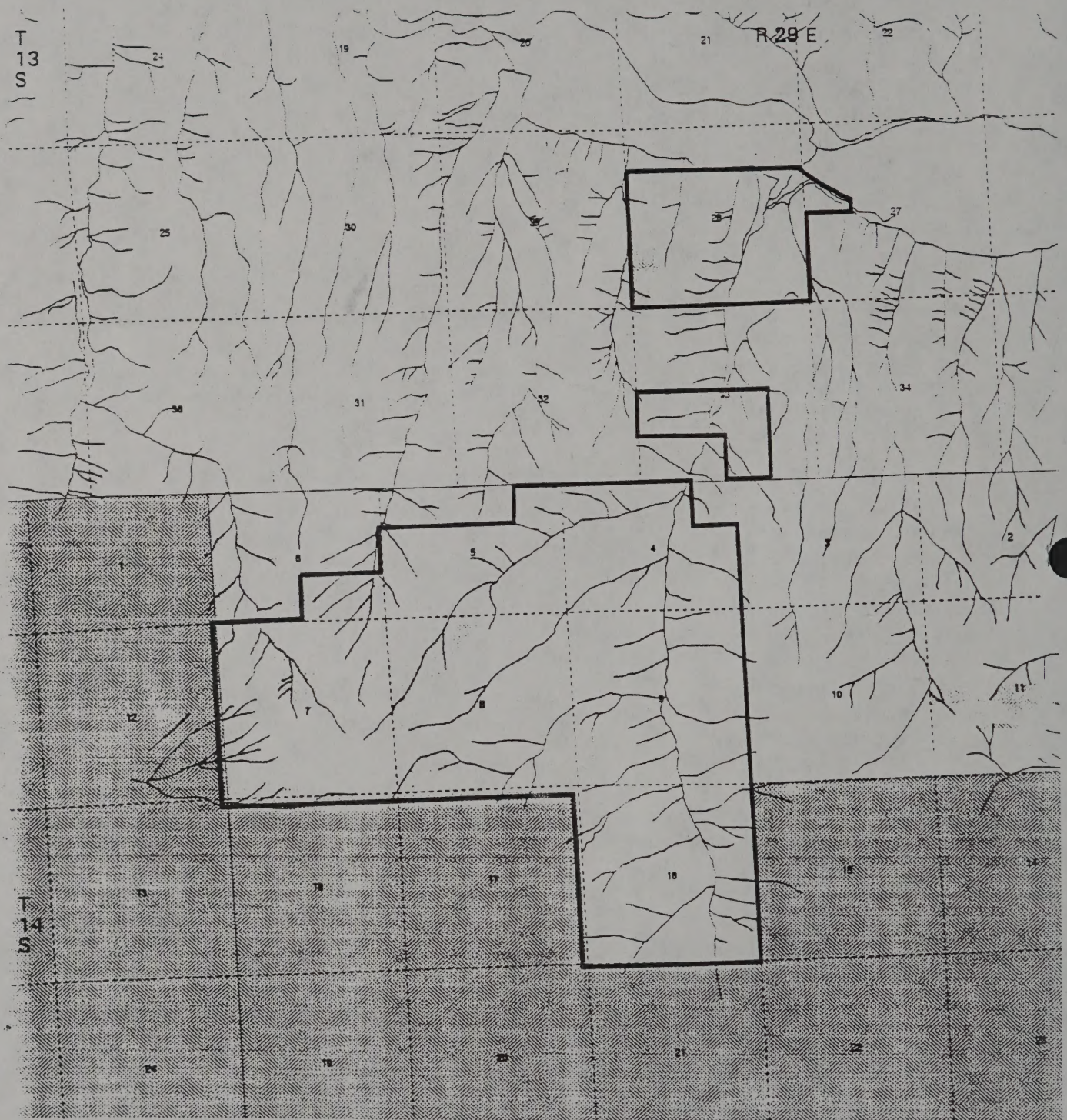
Hydrologic Information:

Several seasonal drainages originate from this BLM parcel: Big Canyon, First and Second Creeks, and Picnic Creek. Very steep side slopes with large rock outcrop areas. No roads exist on BLM portion.

Discussion:

NOALE disposal. These seasonal drainages are tributary to steelhead spawning/rearing in Fields Creek (Big Canyon) or Moon Creek (First and Second Creeks) Picnic Creek an intermittent drainage flows into the John Day River. No potential spawning/rearing in the allotment.

Fields Creek Allotment #04095



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



'999 INDIAN

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 120 Public	Active Preference: 5 AUM's	Seral Stages: 0 Climax
1,920 Private	Season of Use: 5/ 1/00 - 6/15/00	0 Late Seral
<u>2,040 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.40 Perennial	0 Early Seral
Fish Habitat: 0.40 Miles	0.00 Intermittent	0 Unclassified
Steelhead Habitat: 0.40 Miles	0.00 Ephemeral	
	<u>0.40 Total</u>	

Grazing Management:

Grazing season changed to 5/1 to 6/15 in 1998. No actual use information.

Monitoring Information:

Utilization information and one trend study.

Fisheries Information:

None. No stream that would support fish - intermittent drainage 0.75 mile to Indian Creek.

Riparian Information:

No information.

Hydrologic Information:

Discussion:

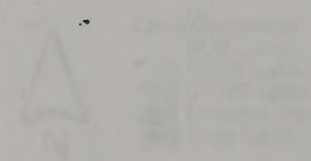
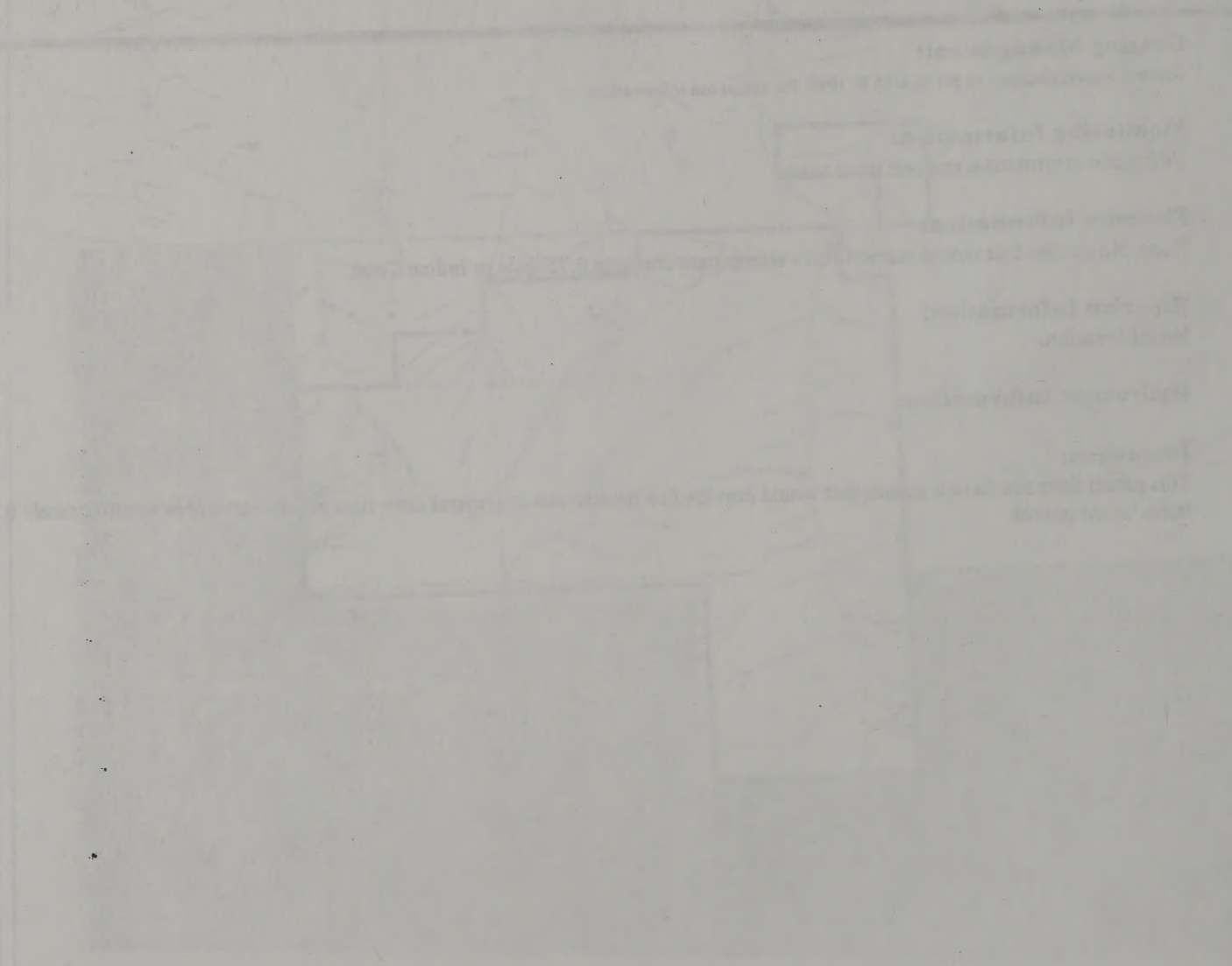
This parcel does not have a stream that would provide fish habitat. An ephemeral draw runs into Indian Creek approximately 0.75 miles below parcel.

Fields Creek Allotment #04033

Page 1 of 1

THE FOLLOWING IS A SUMMARY OF THE INFORMATION CONTAINED IN THE ABOVE TITLED RECORD.

Item	Quantity	Value	Remarks
1. Clearing	100.00	100.00	
2. Labor	100.00	100.00	
3. Fuel	100.00	100.00	
4. Materials	100.00	100.00	
5. Other	100.00	100.00	
Total	500.00	500.00	



100 BOBCAT

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 160 Public	Active Preference: 20 AUM's	Seral Stages: 0 Climax
160 Private	Season of Use: 7/ 1/00 - 10/31/00	0 Late Seral
<u>320 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	1.00 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>1.00 Total</u>	

Grazing Management:

Since 1997 the allotment has been grazed from 7/1 to 9/30. Good grass cover with elk sedge and Idaho Fecue dominating under a patchy overstory of pine and scattered juniper.

Monitoring Information:

None.

Fisheries Information:

No potential on allotment.

Riparian Information:

None.

Hydrologic Information:

Two intermittent draws converge then drain in Grub Creek (steelhead spawning/rearing habitat), 0.1 mile downstream of allotment. Overland erosion potential is low, good ground cover.

Discussion:

NOALE disposal. Intermittent drainages are tributary to Grub Creek, fairly flat topography has low potential for soil movement in spawning/rearing habitat.

Bobcat Allotment #04100

R 32 E

T
12
S

20



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



104 SOUTH FORK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,075 Public	Active Preference: 215 AUM's	Seral Stages:	0 Climax
3,840 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
<u>4,915 Total</u>	Stream Mileage: 0.20 Mainstem		0 Mid Seral
	0.20 Perennial		0 Early Seral
Fish Habitat: 0.20 Miles	2.10 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral		
	<u>2.30 Total</u>		

Grazing Management:

Grazing occurs for 1 1/2 months between 4/15-6/30 on T18S.R28E Sec 24 NW1/4SE1/4 (S.F. John Day River)

Monitoring Information:

None.

Fisheries Information:

The SFJDR contains redband trout in this segment.

Riparian Information:

No information.

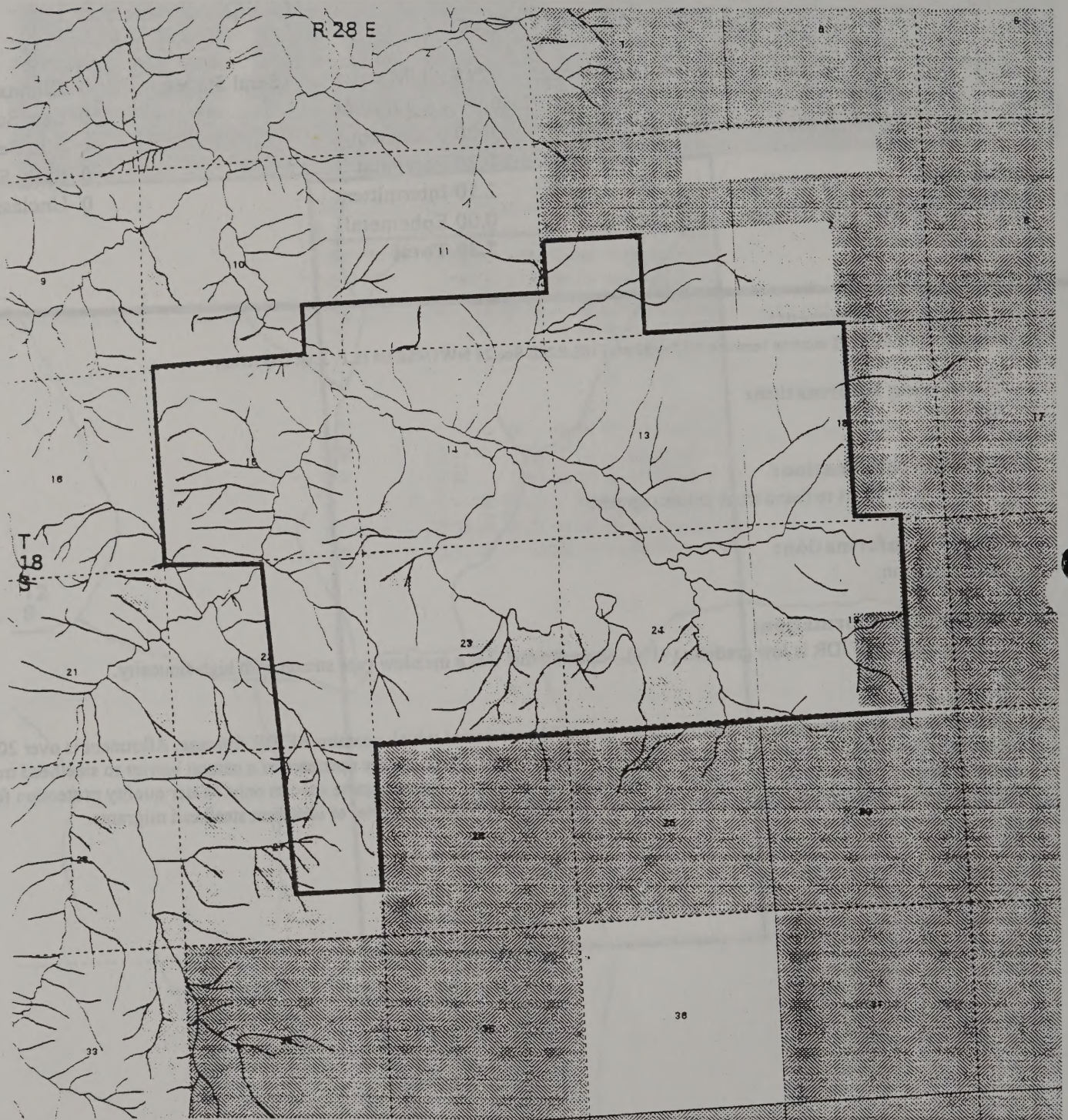
Hydrologic Information:

This segment of SFJDR is low gradient (<1%). Naturally this was a meadow type stream with high sinuosity.

Discussion:

All lands to be disposed in the NOALE, except for the 80 acre parcel which contains SFJDR frontage. Allotment is over 20 river miles upstream of occupied habitat in the SFJDR. Streams in this allotment are upstream of a natural barrier to steelhead trout (Ize Falls on the SF John Day River), and are occupied by redband trout and non-game species only. Water quality protection for this allotment which is approximately 15 miles above Ize falls. The falls is a barrier to upstream steelhead migrants.

South Fork Allotment #04104



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,200 Public	Active Preference: 240 AUM's	Seral Stages:	0 Climax
1,280 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
2,480 Total	Stream Mileage: 0.20 Mainstem		0 Mid Seral
	0.20 Perennial		0 Early Seral
Fish Habitat: 0.20 Miles	0.80 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral		
	1.00 Total		

Grazing Management:

SFJDR is fenced off from grazing.

Monitoring Information:

None.

Fisheries Information:

This segment of the SFJDR supports redband trout, and nongame species.

Riparian Information:

No information.

Hydrologic Information:

This segment of the SFJDR is low gradient (<1%). Naturally this segment was a E channel (meadow type stream). Some areas have downcut significantly.

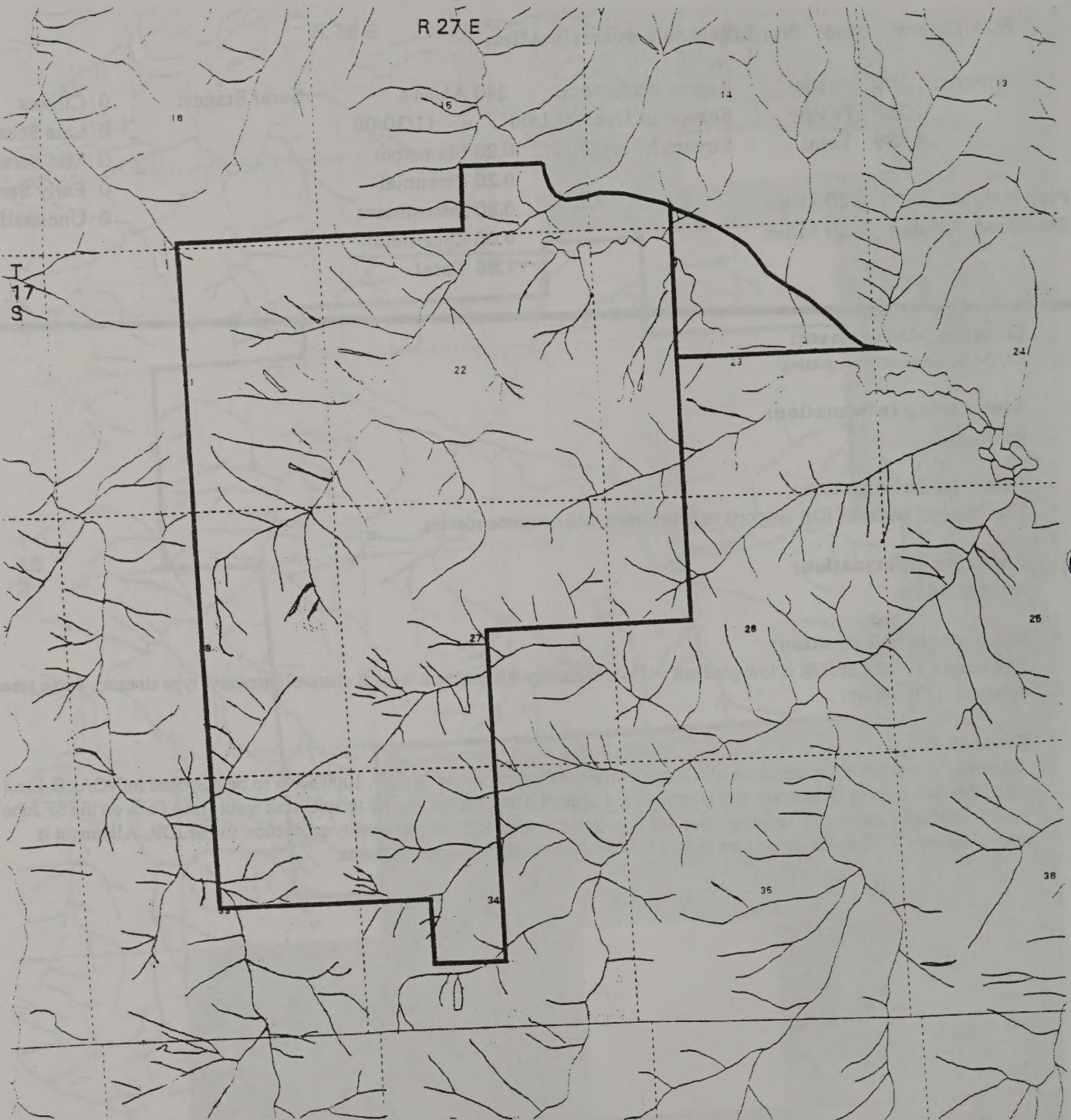
Discussion:

Allotment about 9.4 miles upstream of occupied steelhead habitat in the SFJDR. 1000 acres to be disposed in NOALE. Land on the SFJDR to be retained. Streams in this allotment are upstream of a natural barrier to steelhead trout (Izee Falls on the SF John Day River), and are occupied by redband trout and non-game species only. Water quality protection for SFJDR. Allotment is approximately 9 1/2 miles above Izee falls, a barrier to upstream steelhead migrants.

Izee Allotment #04106

R 27 E

T
17
S



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



109 BIG CANYON CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 148 Public	Active Preference: 20 AUM's	Seral Stages: 0 Climax
1,675 Private	Season of Use: 5/ 1/00 - 11/30/00	0 Late Seral
<u>1,823 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.60 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.00 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>0.60 Total</u>	

Grazing Management:

Upland conditions are in good condition with elksedge on upper slopes and bunchgrassess, cheatgrass, and sandbergs bluegrass on lower slopes. Grasses dominate the ground cover on the allotment.

Grazing occurs for 1 1/2 months between 5/1-8/1 on all T14s.R29E Sec 6 S1/2NW1/4, SW1/4.

Monitoring Information:

None.

Fisheries Information:

No fish habitat in Big Canyon, it is too steep for steelhead to access (26% gradient). Allotment is about 1.0 riverine mile upstream Fields creek which contains spawning/rearing habitat for tealhead/redband trout.

Riparian Information:

No information available.

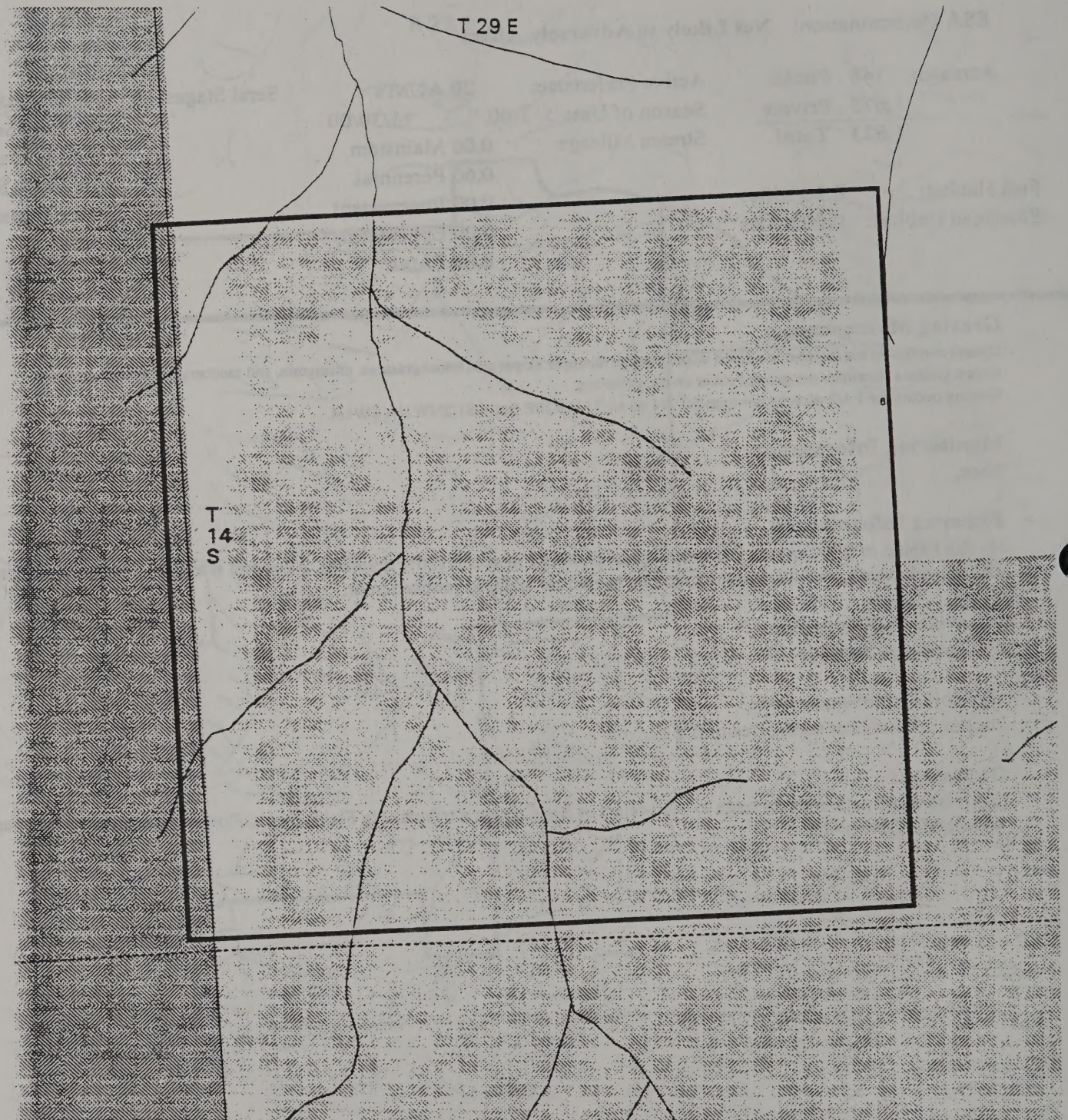
Hydrologic Information:

Located in headwater spring area of Big Canyon.

Discussion:

Intermittent and perennial drainage in headwaters of Big Canyon a tributary to Fields Creek. Flow goes intermittent near confluence. No potential fish habitat.

Big Canyon Creek Allotment #04109



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



'10 FUNNY BUTTE

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,042 Public	Active Preference: 216 AUM's	Seral Stages: 0 Climax
8,910 Private	Season of Use: 6/ 1/00 - 10/ 1/00	0 Late Seral
<u>9,952 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.20 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	1.00 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>1.20 Total</u>	

Grazing Management:

Uplands are in good condition with high diversity of grass and forbe species.

Monitoring Information:

Fisheries Information:

Packwood creek may support redband trout. Allotment is over 12 riverine miles upstream of occupied steelhead habitat.

Riparian Information:

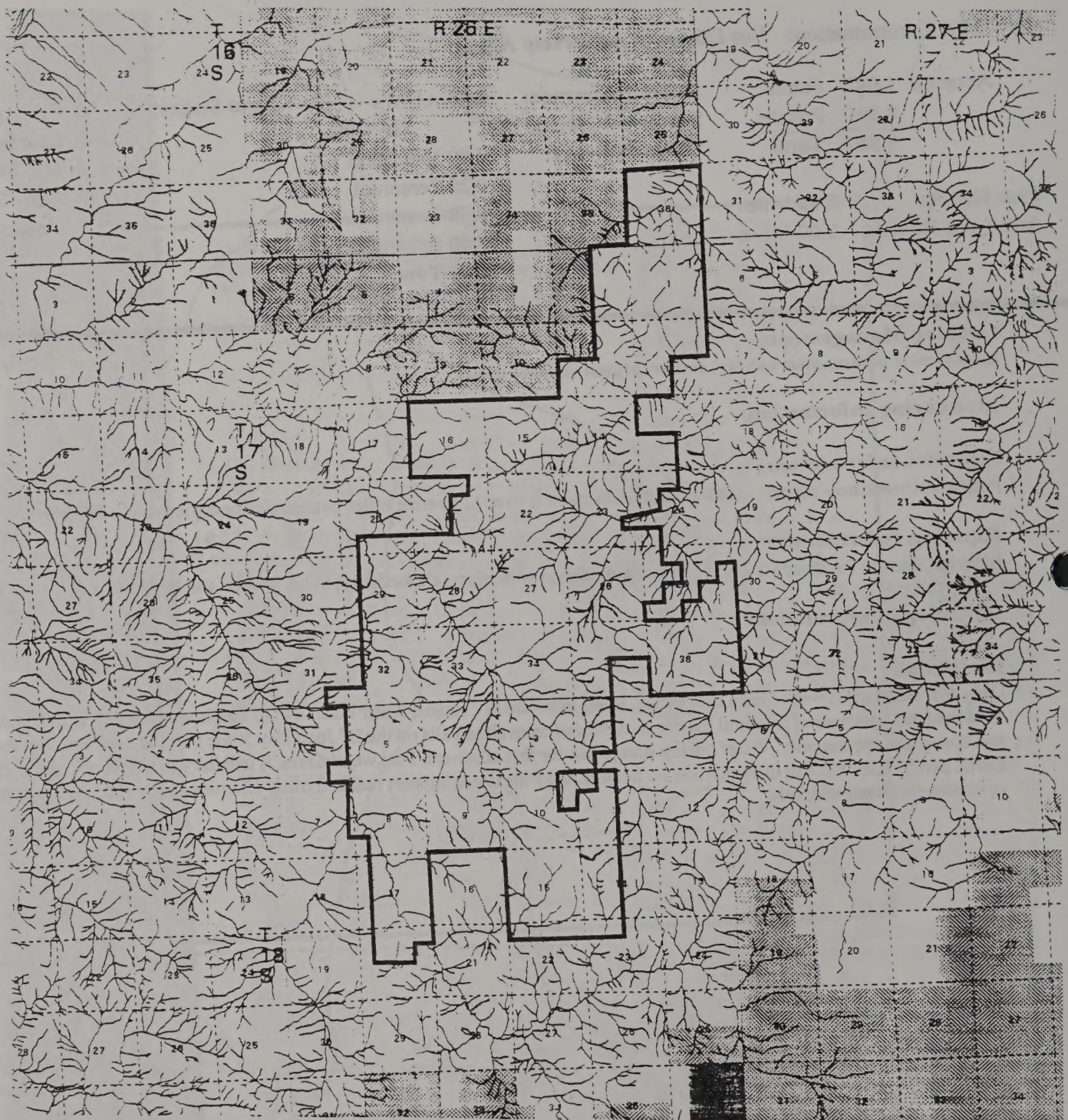
Riparian areas in Packwood creek are in good condition with aspen, chokecherry, alder, willow and large pines.

Hydrologic Information:

Discussion:

Only 400 BLM acres within John Day Basin. Remainder are in Crooked River Basin. All to be disposed in NOALE. Streams in the allotment are upstream of a natural barrier to steelhead trout (Izee Falls on the SF John Day River), and are occupied by redband trout and non-game species only. Water quality protection for this allotment. Packwood Creek is tributary to Brisbois Creek a tributary to Pine Creek and SFJDR. No fish in Packwood but Brisbois and Pine Creek support redband trout. 12 miles above Izee Falls, a barrier to upstream steelhead migrants.

Funny Butte Allotment #04110



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



12 COTTONWOOD FORKS

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1.558 Public	Active Preference: 194 AUM's	Seral Stages:	0 Climax
3,460 Private	Season of Use: 4/ 1/00 - 5/31/00		0 Late Seral
5,018 Total	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.40 Perennial		0 Early Seral
Fish Habitat: 0.40 Miles	4.00 Intermittent		0 Unclassified
Steelhead Habitat: 0.40 Miles	0.00 Ephemeral		
	4.40 Total		

Grazing Management:

Grazing is permitted from 11/1 to 6/15 each year. Topography likely limits most livestock from accessing Cottonwood Creek in the Allotment. The BLM has changed the season of use for the parcels containing Cottonwood creek to 4/15 to 5/31 these parcels are T9S, R27E, all lands in section 25 and NE 1/4, and Cottonwood Creek, NE 1/4SW1/4 of section 36.

Monitoring Information:

Actual use data from 1989 (190 AUM's), 1990 (448 AU's) 1991 (\$#\$ AUM's) 1992(147 AUM's) and 1993 (106 AUM's) One trend study. 1981 riparian habitat inventory of Cottonwood Creek.

Fisheries Information:

This section of Cottonwood Creek is fair to good condition. Good canopy cover from alder, pools are deep through the boulder strewn cascades.

Cottonwood creek is an anadromous system that is used by summer steelhead for spawning and juvenile rearing.

Riparian Information:

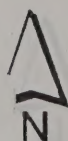
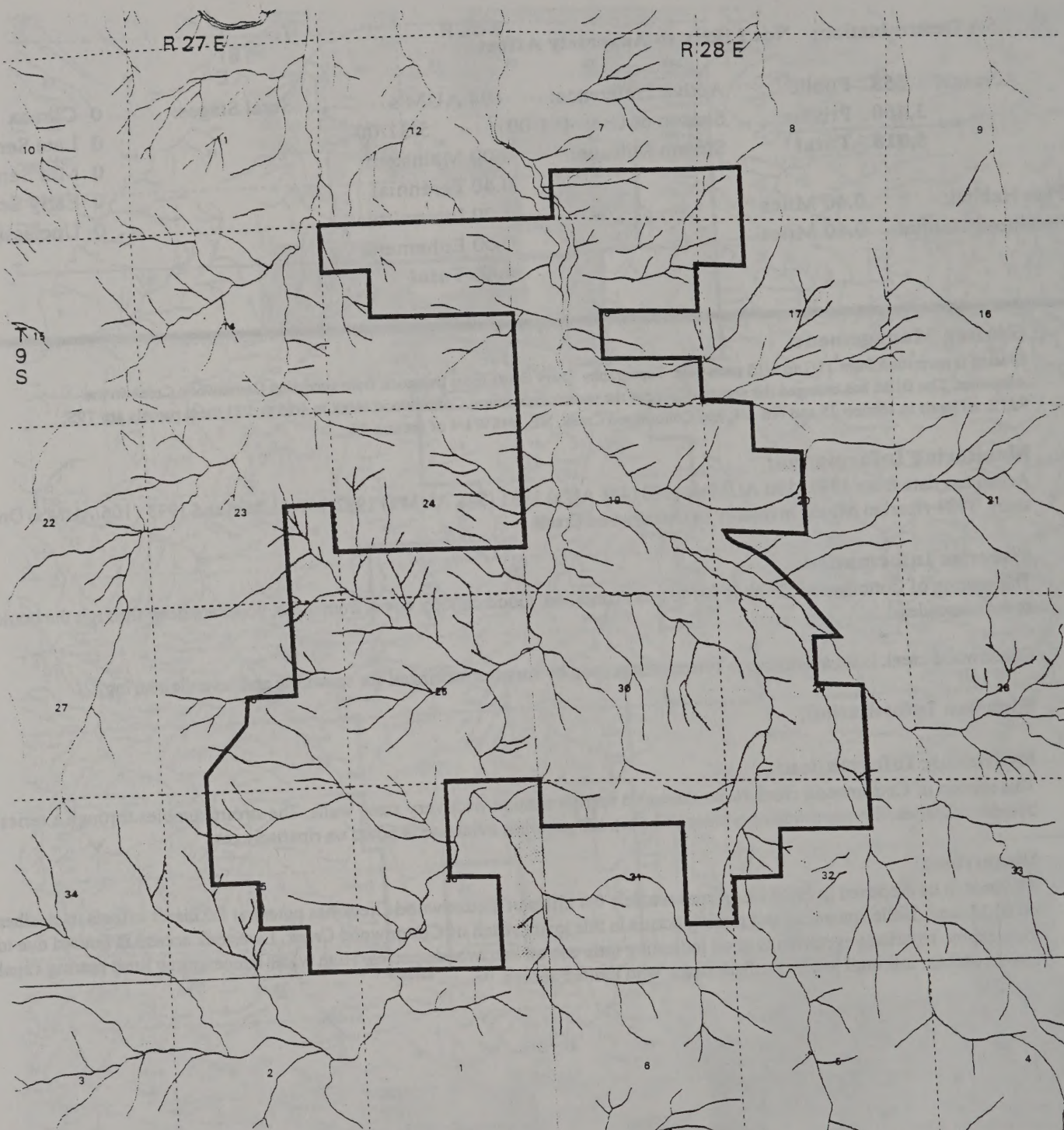
Hydrologic Information:

This section of Cottonwood creek flows through a narrow canyon with very steep walls. The stream tumbles through a series of boulder cascades. Stream gradient is steep (>2.5%). Ice scouring evidence is noted on riparian trees.

Discussion:

All lands to be disposed in NOALE. Approximately 0.4 miles of Cottonwood Creek has potential for direct effects to steelhead red on BLM land. Little spawning and rearing occurs in this lower reach of Cottonwood Creek. Livestock access is limited due to steep topography. riparian vegetation is good indicating little use on hardwood species. High water temperatures limit rearing capability lower reaches. minimal indirect effects occur with limited access.

Cottonwood Forks Allotment #04112



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



13 COURTHOUSE ROCK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 480 Public	Active Preference: 55 AUM's	Seral Stages:	0 Climax
4,560 Private	Season of Use: 6/ 1/00 - 11/ 1/00		0 Late Seral
<u>5,040 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.00 Perennial		0 Early Seral
Fish Habitat: 0.00 Miles	0.70 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral		
	<u>0.70 Total</u>		

Grazing Management:

Monitoring Information:

None.

Fisheries Information:

None.

Riparian Information:

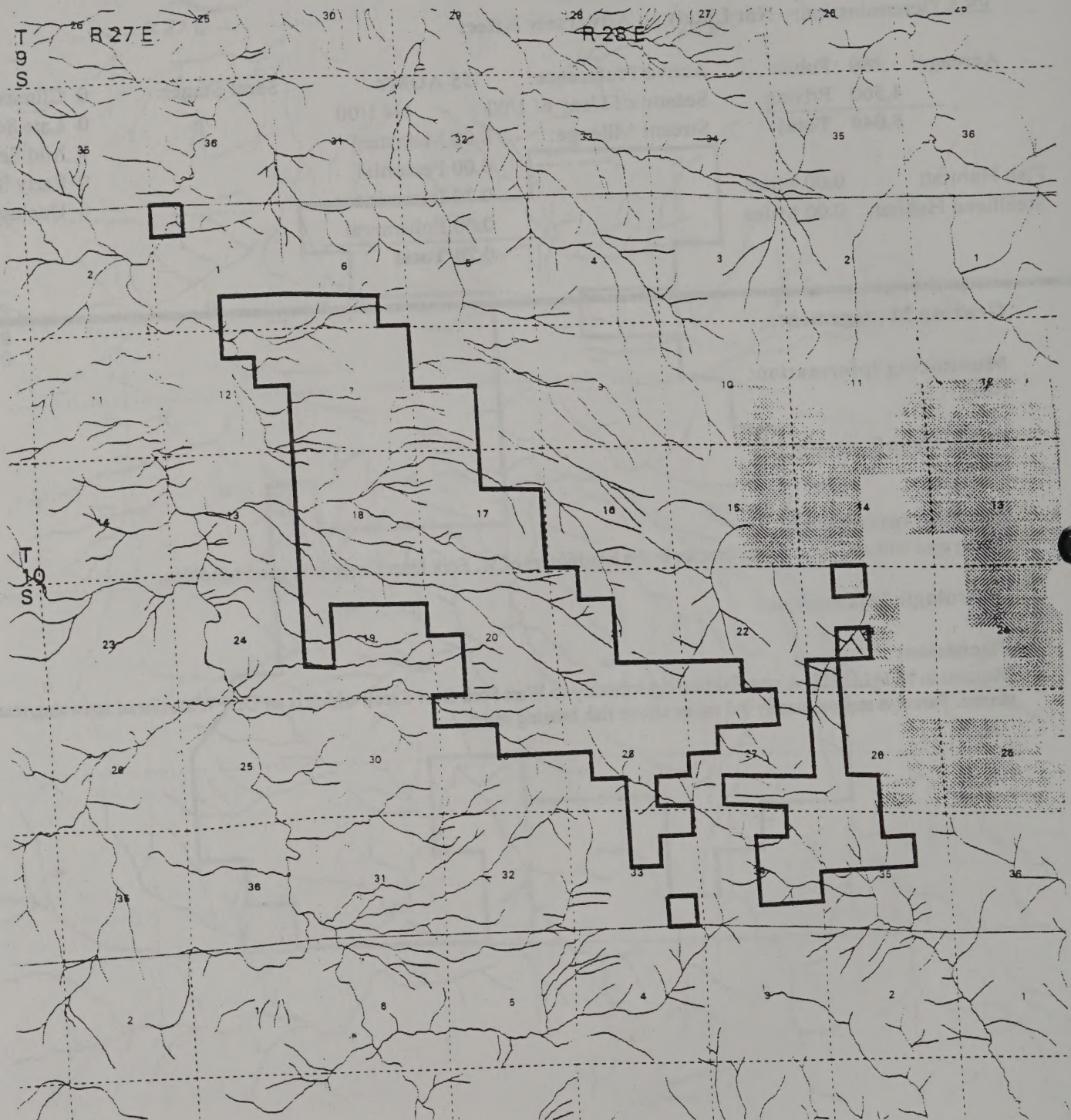
Spring area with aquatic wetland species in the headwaters of W. Fork Deer Creek is in good condition.

Hydrologic Information:

Discussion:

Disposal in NOALE EIS. A non-fishbearing tributary to West Fork Deer Creek which is an ODFW steelhead spawning/rearing stream. Parcel is approximately 0.5 miles above fish bearing reach.

Courthouse Rock Allotment #04113



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



18 BEECH CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,119 Public	Active Preference: 140 AUM's	Seral Stages:	0 Climax
1,940 Private	Season of Use: 5/ 1/00 - 11/30/00		0 Late Seral
<u>3,059 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.30 Perennial		0 Early Seral
Fish Habitat: 0.00 Miles	3.40 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral		
	<u>3.70 Total</u>		

Grazing Management:

Grazing use on BLM land is associated with a Forest Service allotment, and livestock graze BLM lands in fall (Sept.-Nov.) Upland forage conditions are good with ample grass cover. most of the allotment is forested habitat with pine overstory. Steep side slopes discourage heavy grazing use along Beech Creek.

Monitoring Information:

None.

Fisheries Information:

This section of Beech Creek (0.3 miles total between two segments.) is in fair to good condition. Mature cottonwoods and pine provide a good overstory (shade) and willows and shrubs provide streambank stability. Beech creek provides spawning and rearing habitat for summer steelhead.

Riparian Information:

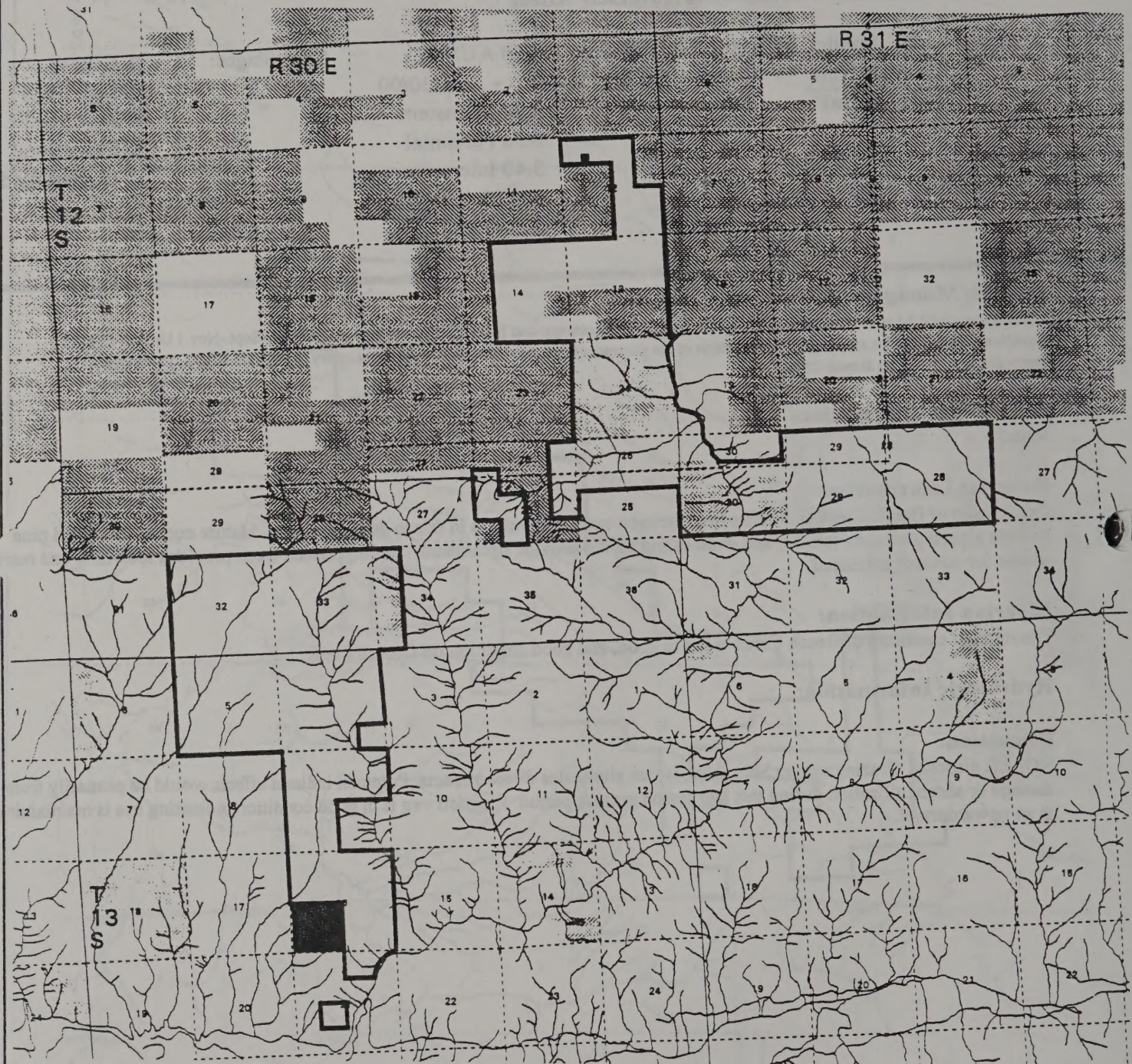
The riparian condition of Beech Creek is fair to good, and good condition on Grouse Creek.

Hydrologic Information:

Discussion:

NOALE disposal. Grazing occurs Sept.-Nov. which eliminates direct impacts. Potential indirect effects would be primarily from b damage or shrub utilization during this late season grazing period. Riparian veg is in good condition indicating use is maintaining in an upward trend.

Beech Creek Allotment #04118



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



19 BLACK CANYON

ESA Determination: Not Likely to Adversely Affect

Acreage: 944 Public	Active Preference: 188 AUM's	Seral Stages:	0 Climax
2,880 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
<u>3,824 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.50 Perennial		0 Early Seral
Fish Habitat: 0.00 Miles	3.00 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral		
	<u>3.50 Total</u>		

Grazing Management:

Grazing occurs from 4/15-5/31 on T14S, R26E Sec 14 SW1/4NW1/4 (Youngs Creek), Sec 15 NE1/4NW1/4 (Youngs Creek)

Monitoring Information:

None.

Fisheries Information:

None.

Riparian Information:

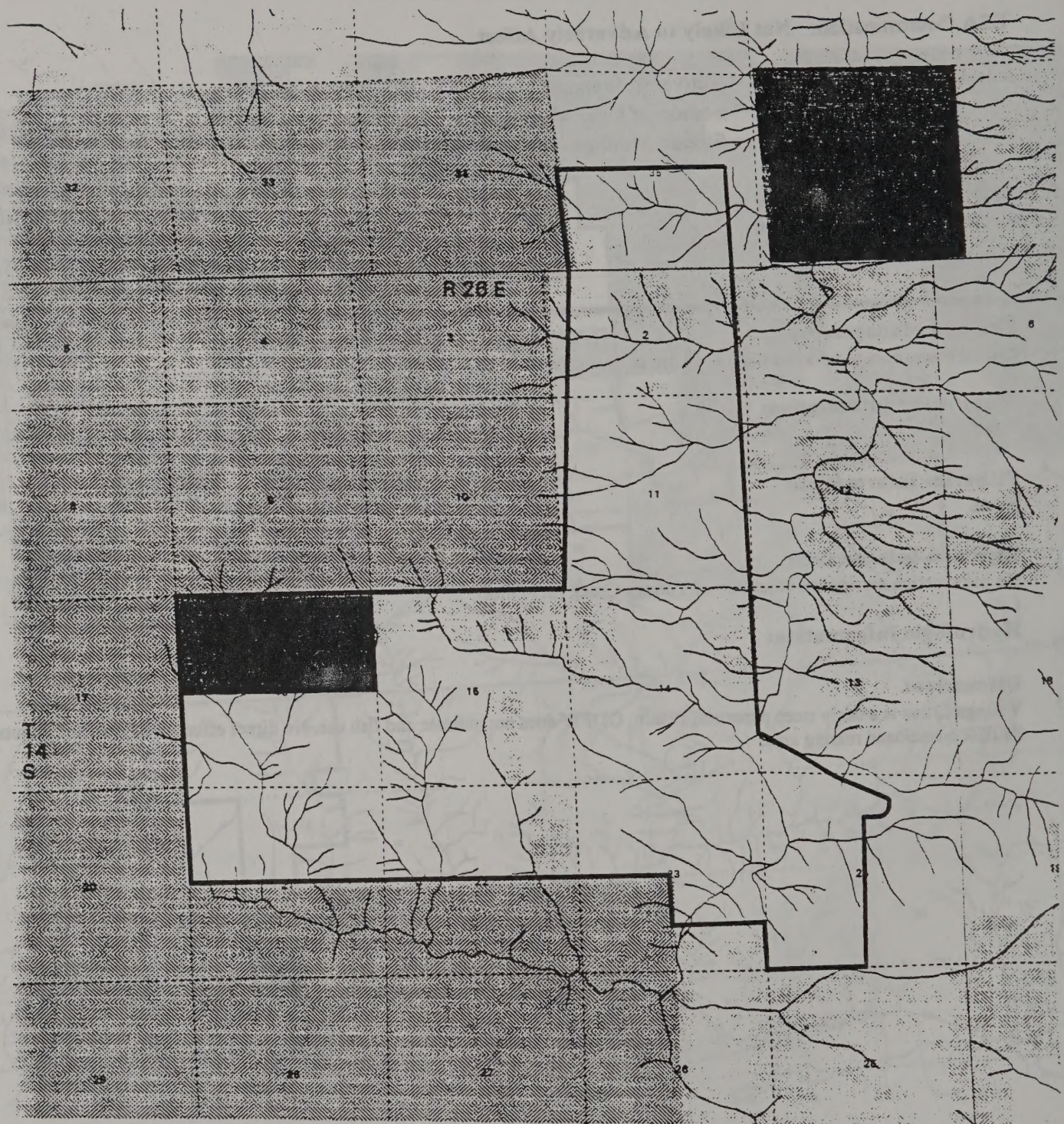
No information on riparian condition of Youngs Creek (0.5 miles).

Hydrologic Information:

Discussion:

Youngs Creek is a fairly steep perennial stream. ODFW does not indicate and fish use. No direct effects would occur. Tributary to SFJDR a steelhead rearing area.

Black Canyon Allotment #04119



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



120 FERRIS CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 3,177 Public	Active Preference: 280 AUM's	Seral Stages: 0 Climax
1,960 Private	Season of Use: 4/15/00 - 9/15/00	15 Late Seral
<u>5,137 Total</u>	Stream Mileage: 0.00 Mainstem	33 Mid Seral
	0.70 Perennial	47 Early Seral
Fish Habitat: 0.00 Miles	9.70 Intermittent	5 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>10.40 Total</u>	

Grazing Management:

Four pasture rest rotation system with one pasture grazed from 4/15-5/31, the other two pastures are grazed between 6/1 to 9/15. Actual use data from since 1989 has averaged 131 AUM's.

Monitoring Information:

Utilization information, riparian photopoint and fire trend studies.

Fisheries Information:

None, no known presence.

Riparian Information:

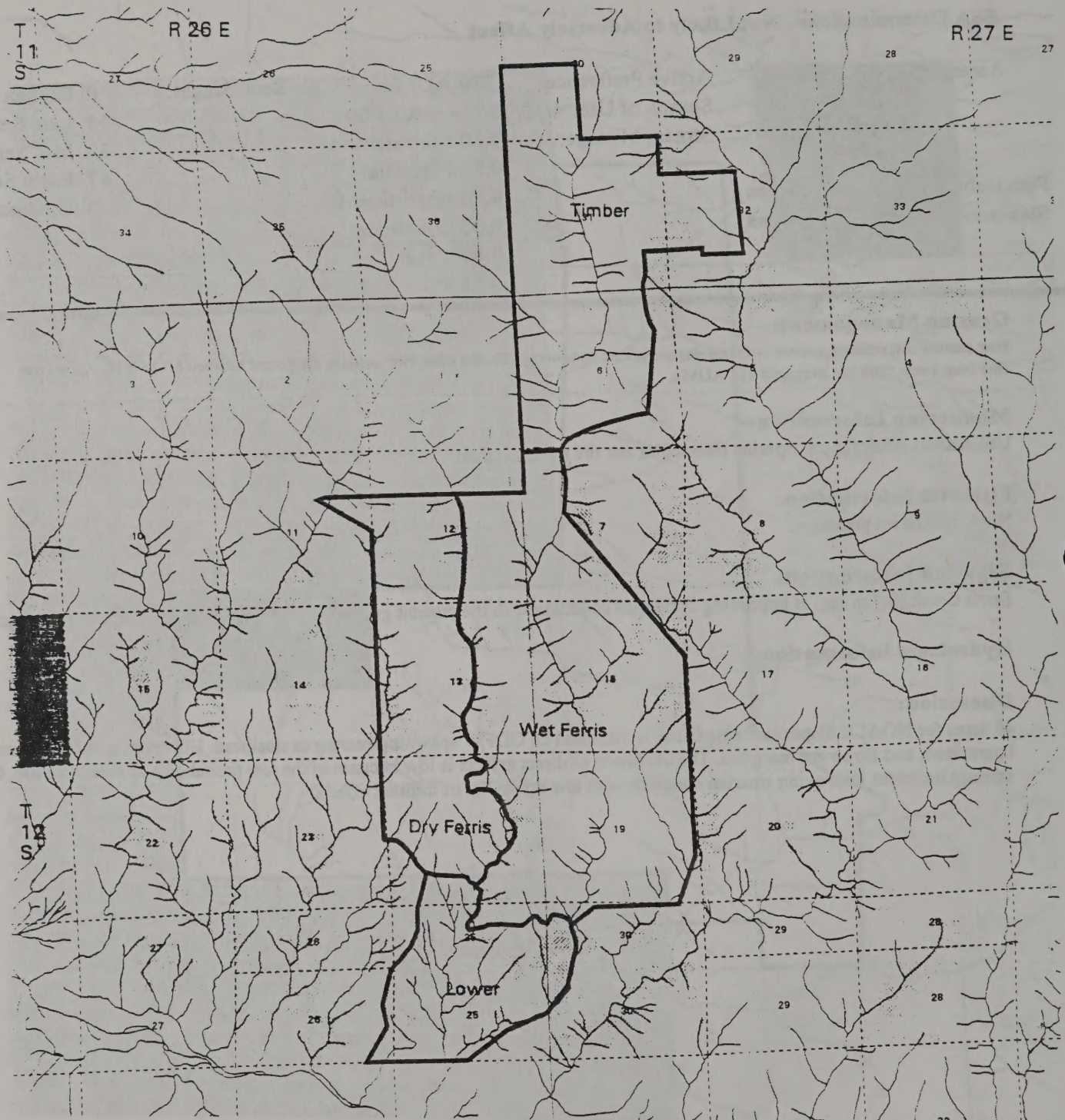
Ferris Creek (0.7 miles) is improving in riparian condition with the current grazing strategy. Riparian condition is fair to good.

Hydrologic Information:

Discussion:

40 acres for NOALE disposal. Ferris Creek is identified on ODFW spawning/rearing as steelhead. However, most of the stream is intermittent and flows are marginal. The likelihood of direct effects is low because of the low probability of steelhead use. Grazing strategy indicates improving riparian condition with low probability of indirect effects.

Ferris Creek Allotment #04120



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



21 AIRPORT

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 320 Public	Active Preference: 40 AUM's	Seral Stages: 0 Climax
216 Private	Season of Use: 4/ 1/00 - 11/30/00	0 Late Seral
536 Total	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.20 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.90 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	1.10 Total	

Grazing Management:

Upland grass cover is 60% dominated by annual species.

Monitoring Information:

None.

Fisheries Information:

None, no potential, channel is too small and too steep (13%) for steelhead use.

Riparian Information:

The lower portion of Blue Gulch (0.2 miles) has perennial flow with a swampy wetland area. Willows, cattails and shrubs line the small stream channel.

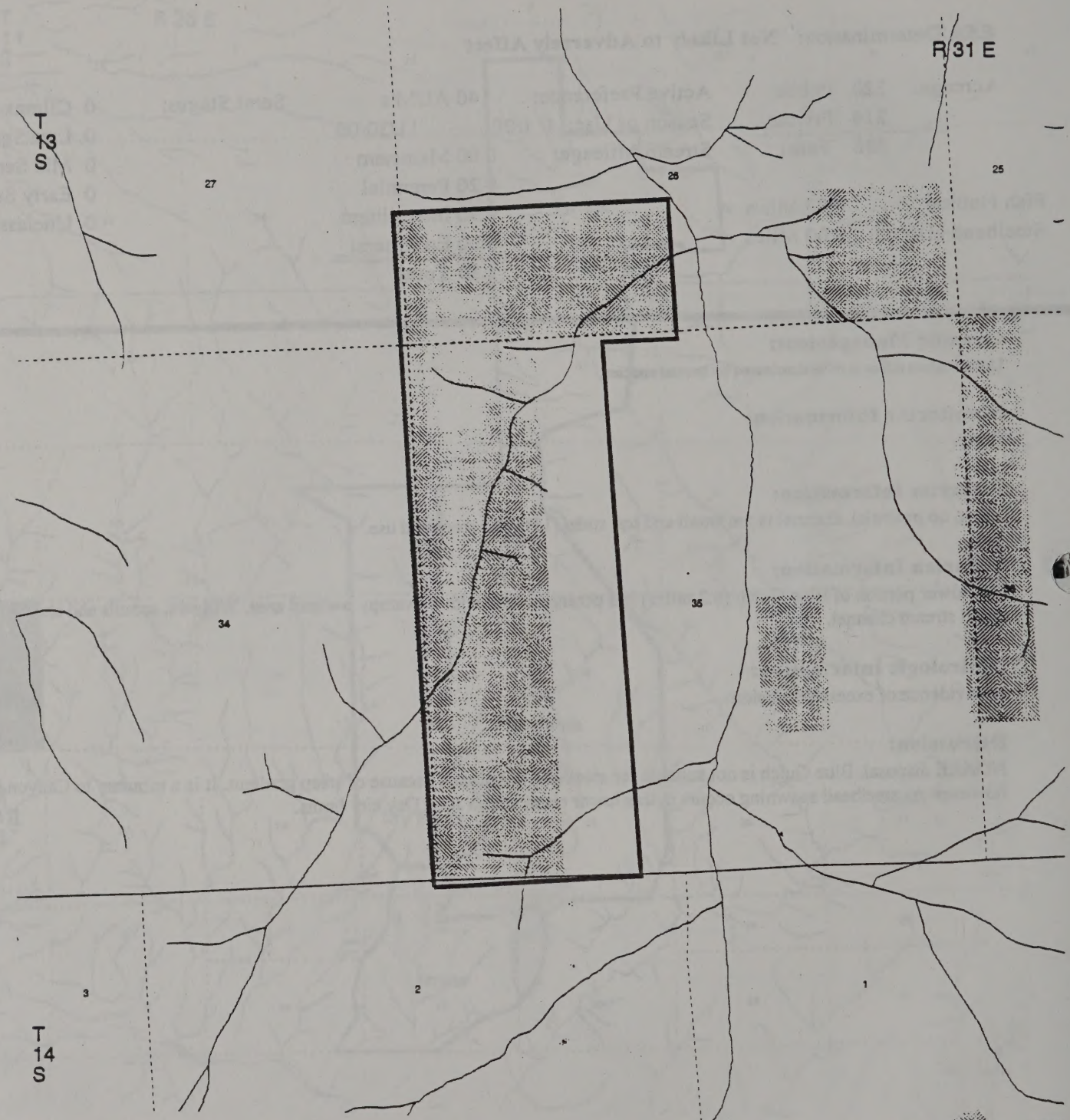
Hydrologic Information:

No evidence of excessive erosion.

Discussion:

NOALE disposal. Blue Gulch is not suitable for steelhead or redband because of steep gradient. It is a tributary to Canyon Creek however, no steelhead spawning occurs in this lower reach within John Day city limits.

Airport Allotment #04121



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



4 SMOKEY CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 2.213	Public	Active Preference:	307 AUM's	Seral Stages:	0 Climax
2,000	Private	Season of Use: 7/ 1/00	- 11/30/00		50 Late Seral
4,213	Total	Stream Mileage:	0.20 Mainstem		22 Mid Seral
			1.60 Perennial		13 Early Seral
Fish Habitat:	0.20 Miles		5.20 Intermittent		15 Unclassified
Steelhead Habitat:	0.20 Miles		0.00 Ephemeral		
			6.80 Total		

Grazing Management:

Nonuse in 1999 except for an upland 640 acre pasture which will be grazed 4/15-5/31. Various actual use data from 1969-1998 ranges from nonuse to 303 AUM's.

Monitoring Information:

Utilization studies and four trend studies. 1992 riparian photopoint inventory on SFJDR.

Fisheries Information:

Smoky creek (1.4 miles) is in fair to good condition for fish habitat. Steelhead are currently unable to access Smoky creek because passage is blocked by a culvert at the streams mouth. Redband trout are present in Smoky creek above the culvert. Generally the stream is narrow with well vegetated banks. Some cutbanks are present. Smoky creek could provide spawning and rearing habitat for summer steelhead. A project to replace the culvert with design to facilitate fish passage is being pursued. High water temperatures in the SFJDR are not meeting state standards.

Riparian Information:

Riparian condition of Smoky creek is improving. Cottonwoods, willows and riparian shrubs are fairly common along the stream. Riparian condition of SFJDR is good with sedge bunchgrasses, willows, alders and other shrubs. Probably proper functioning condition.

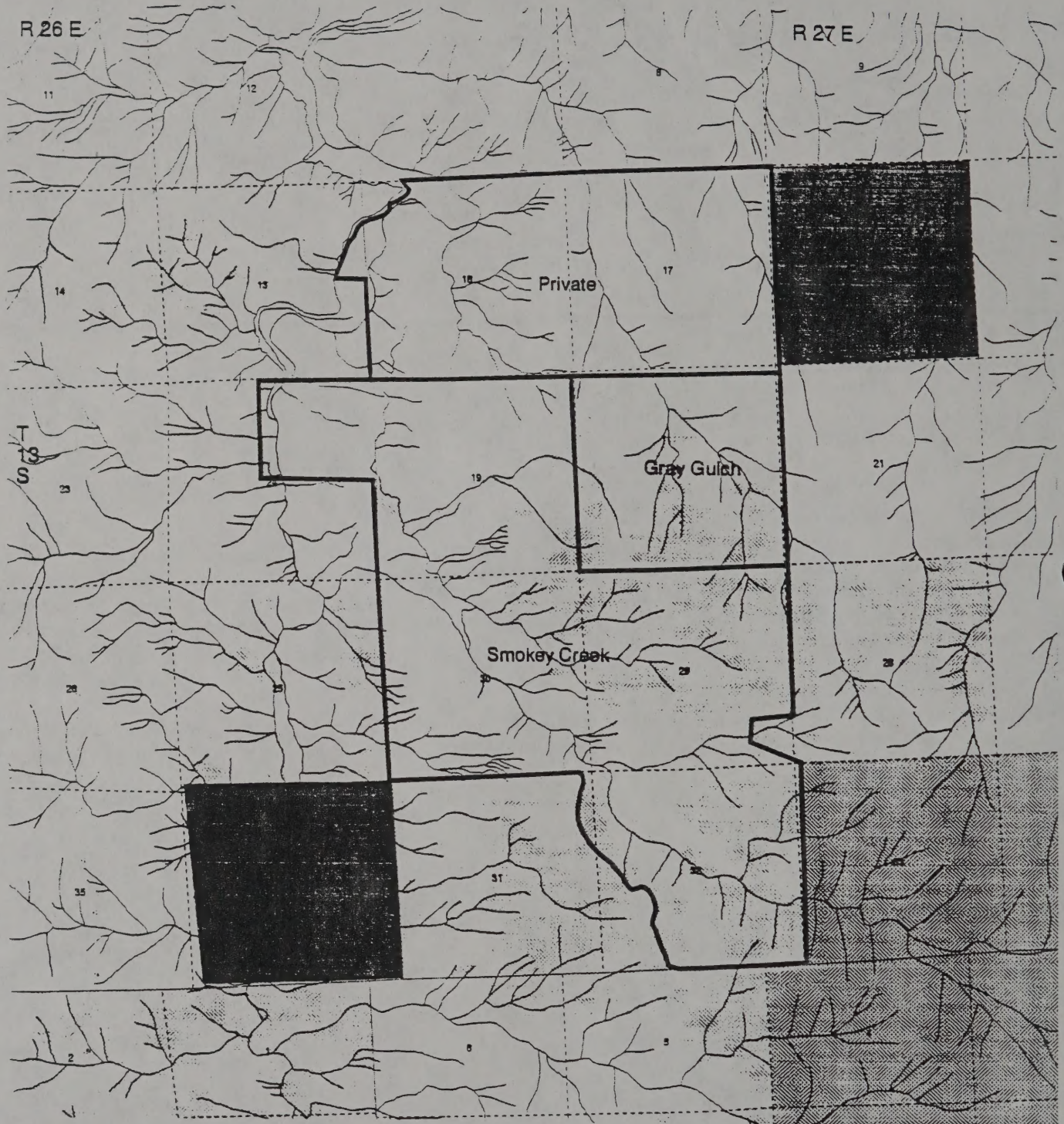
Hydrologic Information:

Stream gradient is fairly steep (about 8%).

Discussion:

Culvert replacement in July-August 2000 may provide access to approximately 1.3 miles of potential spawning/rearing habitat. Early season use could potentially affect redds, however steep gradient limits spawning gravels and minimizes spawning locations. Early season use results in little or no use of hardwoods and bank rock content provides bank stability.

Smokey Creek Allotment #04124



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



25 UMATILLA

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 679 Public	Active Preference: 113 AUM's	Seral Stages:	0 Climax
1,970 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
<u>2,649 Total</u>	Stream Mileage: 0.90 Mainstem		0 Mid Seral
	0.90 Perennial		0 Early Seral
Fish Habitat: 0.90 Miles	1.20 Intermittent		0 Unclassified
Steelhead Habitat: 0.90 Miles	0.00 Ephemeral		
	<u>2.10 Total</u>		

Grazing Management:

Grazing season along the NFJDR was restricted to 4/1-5/31 in 1998.

Monitoring Information:

1981 riparian habitat inventory. 1996 photopoint study.

Fisheries Information:

This section of the NFJDR provides fair winter rearing habitat for juvenile steelhead. Water quality problems, include high summer temperatures, and active cutbanks. Recovery of riparian shrubs, sedges, and willows along streambanks could improve rearing habitat for steelhead. Nongame fish species are common.

Riparian Information:

Riparian condition rated poor to fair in 1981 inventory. It appears that conditions have improved since then. riparian willows and shrubs are increasing in density. conditions probably fair overall with improving trend in riparian condition. Sedge bunchgrasses are scattered along streambanks.

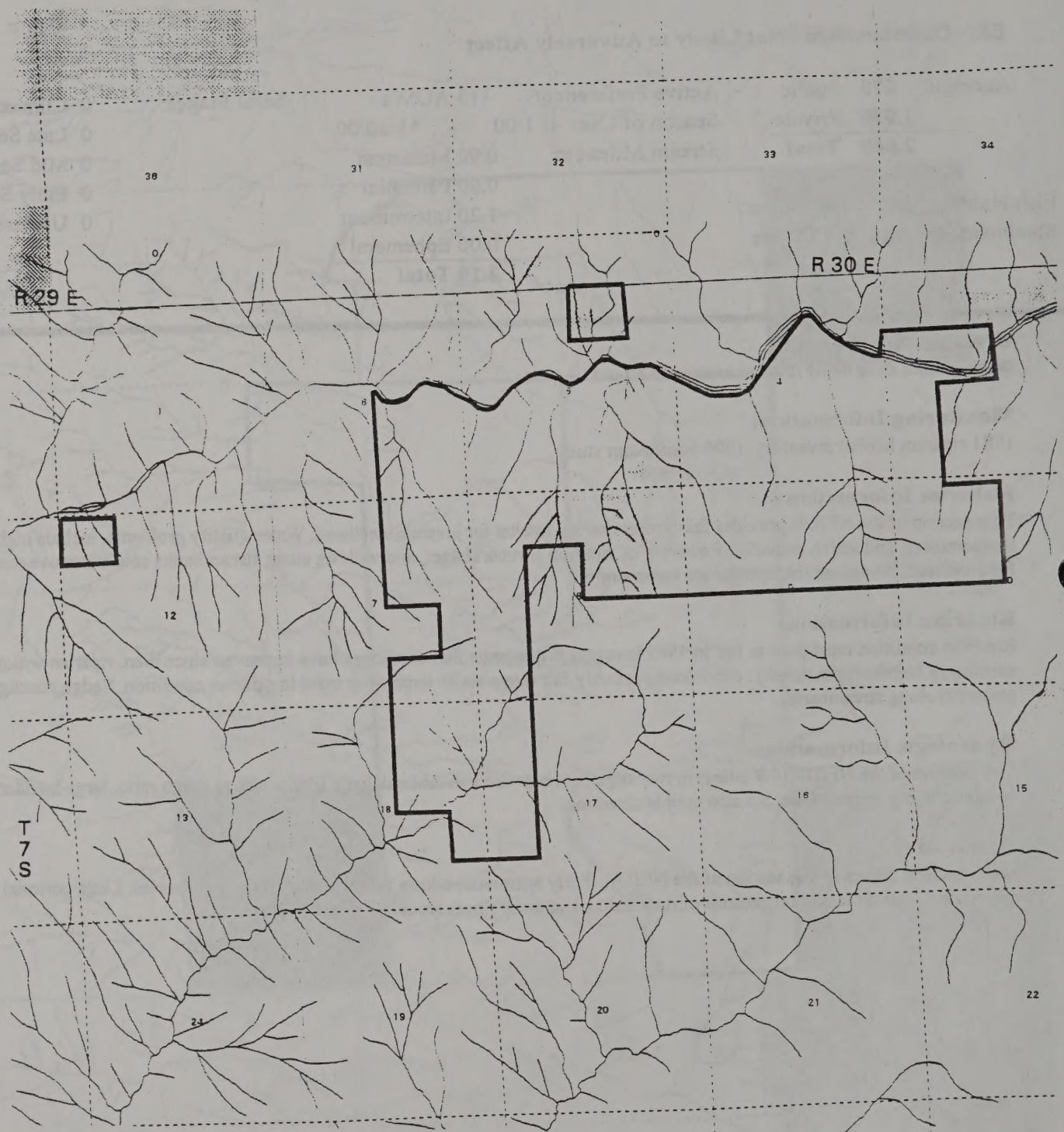
Hydrologic Information:

This section of the NFJDR (0.9 miles) in two segments between private land, has a high width to depth ratio, large boulders are common along streambanks, but also cobble sized too.

Discussion:

No spawning occurs in this section of the NFJDR. Early season use allows for recovery of riparian species. Little potential for improving riparian condition because of rock banks and steep slopes resulting in low livestock use.

Umatilla Allotment #04125



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



128 CUMMINGS CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 160 Public	Active Preference: 20 AUM's	Seral Stages:	0 Climax
600 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
760 Total	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.00 Perennial		0 Early Seral
Fish Habitat: 0.00 Miles	0.60 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral		
	0.60 Total		

Grazing Management:

No information on actual use or timing, but permittee grazes livestock about 4-6 weeks each year in the allotment. Upland ground cover condition is good. mostly forested. grasses include elk sedge, bunchgrass, sandbergs bluegrass, and some fescue.

Monitoring Information:

None.

Fisheries Information:

No fish habitat, seasonal drainages dry up.

Riparian Information:

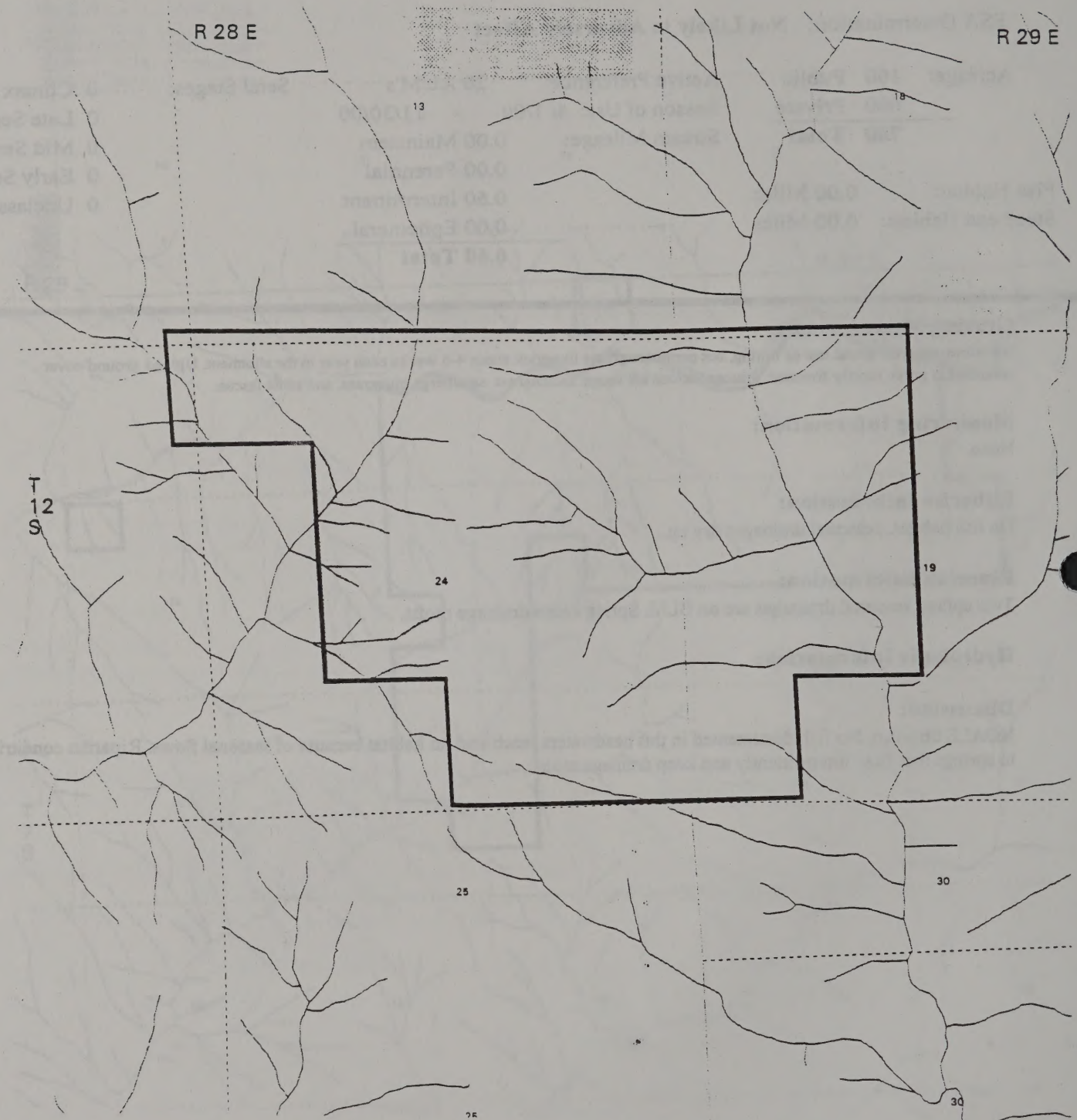
Two upland seasonal drainages are on BLM. Spring keeps drainage moist.

Hydrologic Information:

Discussion:

NOALE disposal. No fish documented in this headwaters reach and no habitat because of seasonal flows. Riparian condition limit to springs that flow intermittently and keep drainage moist.

Cummings Creek Allotment #04128



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



4129 BELSHAW CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: .641 Public	Active Preference: 80 AUM's	Seral Stages:	0 Climax
5,320 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
<u>5,961 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.10 Perennial		0 Early Seral
Fish Habitat: 0.10 Miles	1.50 Intermittent		0 Unclassified
Steelhead Habitat: 0.10 Miles	0.00 Ephemeral		
	<u>1.60 Total</u>		

Grazing Management:

No data on actual grazing use. Good forage and grass coverage on all BLM land. Mostly upland habitats. Little evidence of recent livestock grazing. Mix of juniper/bunchgrasses lands and pine/juniper/bunchgrass and pine/Idaho fescue/cheatgrass. It appears that grazing use is minimal. When grazed the season of use is 4/1 to 11/30.

Monitoring Information:

None.

Fisheries Information:

Belshaw creek (0.1 miles) supports spawning/rearing habitat for summer steelhead.

Riparian Information:

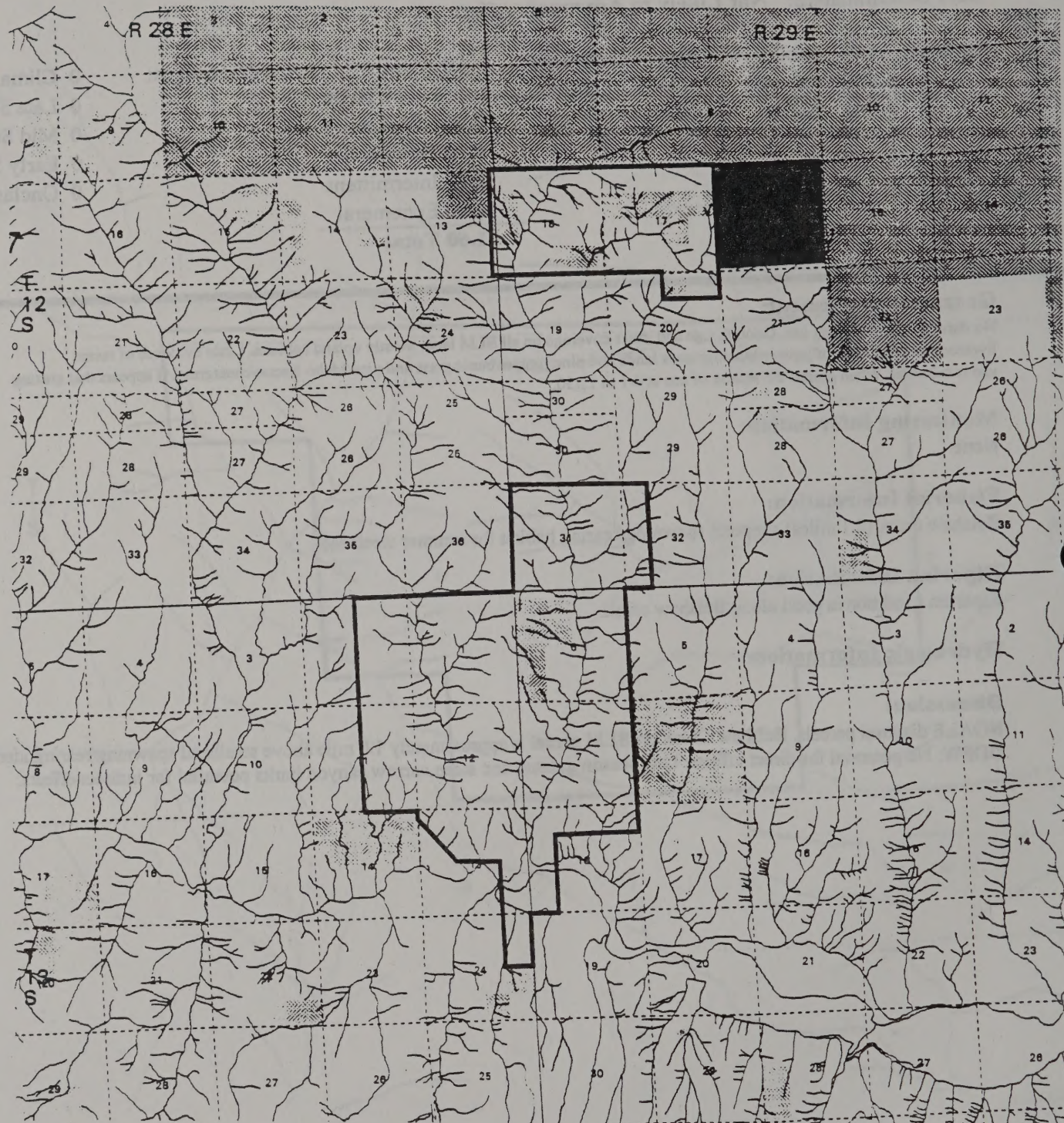
Riparian condition is good along Belshaw creek.

Hydrologic Information:

Discussion:

NOALE disposal parcels. Belshaw Creek on BLM parcel is approximately 1.0 mile above steelhead spawning/rearing identified by ODFW. No potential for direct effects. Late season grazing and steep narrow canyon limits potential for indirect effects.

Belshaw Creek Allotment #04129



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



131 DAY CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,583	Public	Active Preference:	160 AUM's	Seral Stages:	0 Climax
1,300	Private	Season of Use: 4/ 1/00	- 10/31/00		13 Late Seral
2,883	Total	Stream Mileage:	0.00 Mainstem		45 Mid Seral
			0.30 Perennial		41 Early Seral
Fish Habitat:	0.00 Miles		4.50 Intermittent		1 Unclassified
Steelhead Habitat:	0.00 Miles		0.00 Ephemeral		
			4.80 Total		

Grazing Management:

Two pasture rotation system 4/1-7/14 then 7/14-10/30 in the second pasture. This system has been used since 1991. Actual grazing use in AUM's has been 74, 63, 152 and 110 in 1993, 94, 95, and 1998 respectively.

Monitoring Information:

Utilization information, one trend study.

Fisheries Information:

Headcutting in lower Day Creek has blocked steelhead access to upper reaches of the stream on BLM. Historically it likely contain spawning and rearing habitat for summer steelhead. Redband trout are likely present on BLM, but unconfirmed.

Riparian Information:

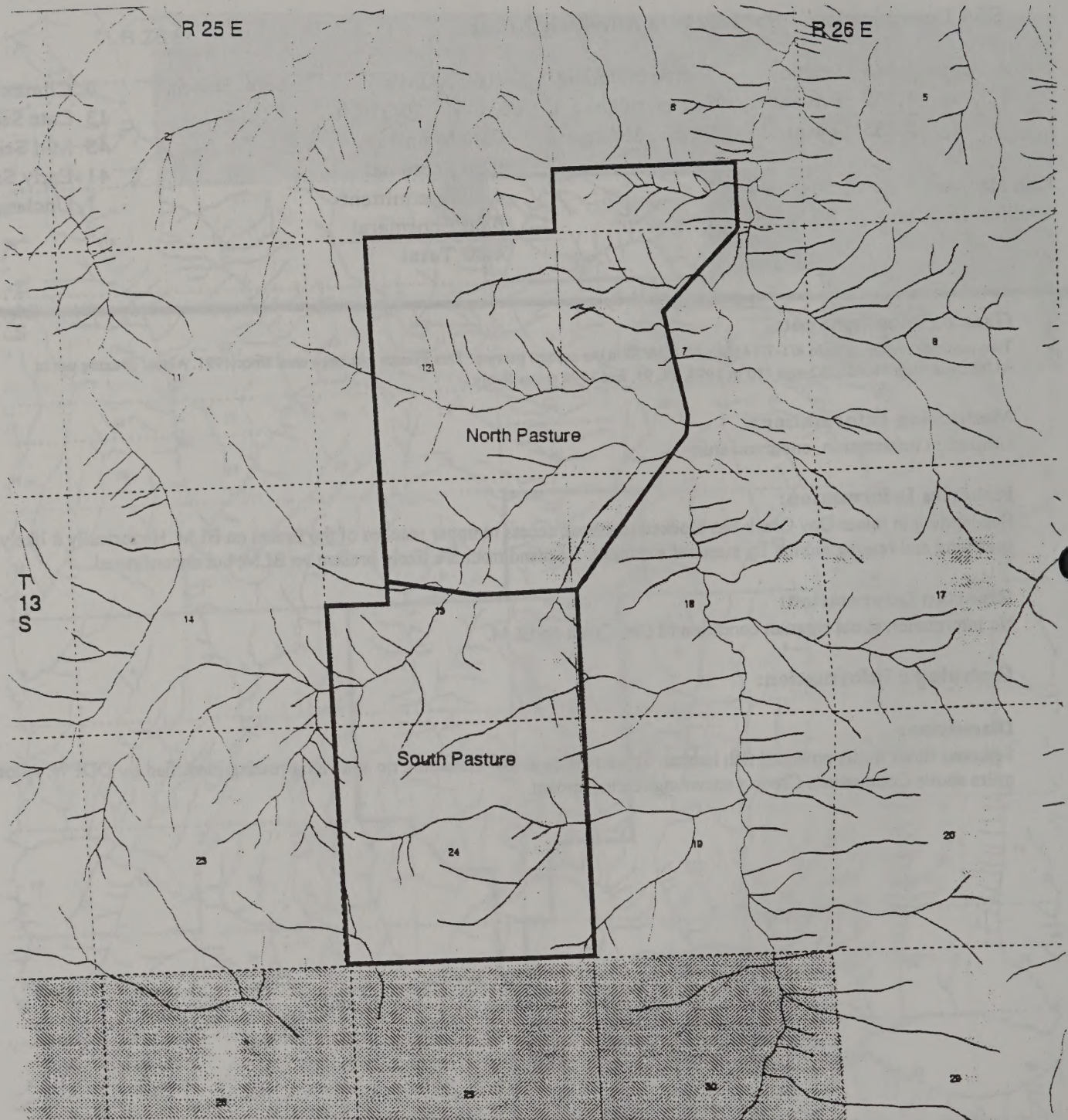
No information about riparian condition of Day Creek on BLM.

Hydrologic Information:

Discussion:

Seasonal flows limits potential fish habitat. Stream heads at low elevation, no spawning/rearing identified by ODFW. Allotment 1. miles above Cottonwood Creek a spawning/rearing stream.

Day Creek Allotment #04131



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



134 LOOKOUT

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 119 Public	Active Preference: 15 AUM's	Seral Stages: 0 Climax
800 Private	Season of Use: 5/ 1/00 - 10/ 1/00	0 Late Seral
919 Total	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.60 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	0.60 Total	

Grazing Management:

No information on actual grazing use. Upland forage and ground cover condition is good.

Monitoring Information:

None.

Fisheries Information:

None.

Riparian Information:

Potential along Jordan Creek (0.6) miles a seasonal stream appears in good condition.

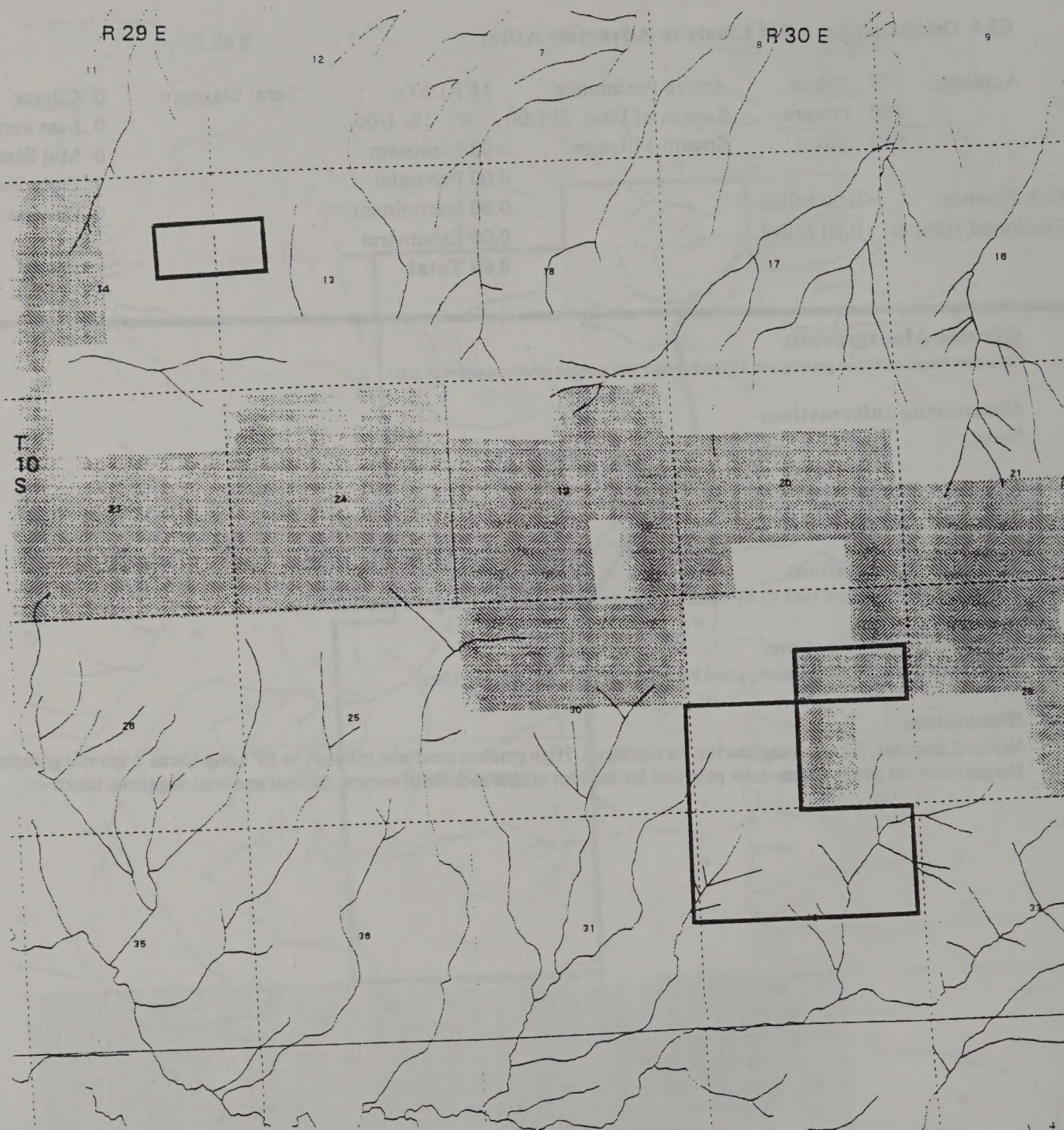
Hydrologic Information:

Jordan Creek has 5-7% gradient, good bank vegetation, grasses, conifers.

Discussion:

NOALE disposal. No spawning/rearing for steelhead. High gradient perennial tributary to SF Long Creek a spawning/rearing stream. No potential for direct effects. Low potential for indirect effects because of narrow channel and well vegetated banks.

Lookout Allotment #04134



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



135 GIBSON CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 120 Public	Active Preference: 20 AUM's	Seral Stages: 0 Climax
1,480 Private	Season of Use: 4/ 1/00 - 11/30/00	0 Late Seral
<u>1,600 Total</u>	Stream Mileage: 0.25 Mainstem	0 Mid Seral
	0.25 Perennial	0 Early Seral
Fish Habitat: 0.25 Miles	0.00 Intermittent	0 Unclassified
Steelhead Habitat: 0.25 Miles	0.00 Ephemeral	
	<u>0.25 Total</u>	

Grazing Management:

Grazing season changed in 1998 to 4/1-5/31 on the MFJDR. Generally the parcel was grazed in springtime prior to 1998.

Monitoring Information:

Riparian photopoint established in 1998. 1981 riparian habitat inventory.

Fisheries Information:

This section of the MFJDR (0.25 miles) is used as winter rearing habitat by summer steelhead juveniles. Cobbles, boulders and overhanging sedge bunchgrass provide good fish cover. Pine overstory provides shade to river.

Riparian Information:

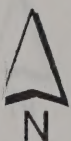
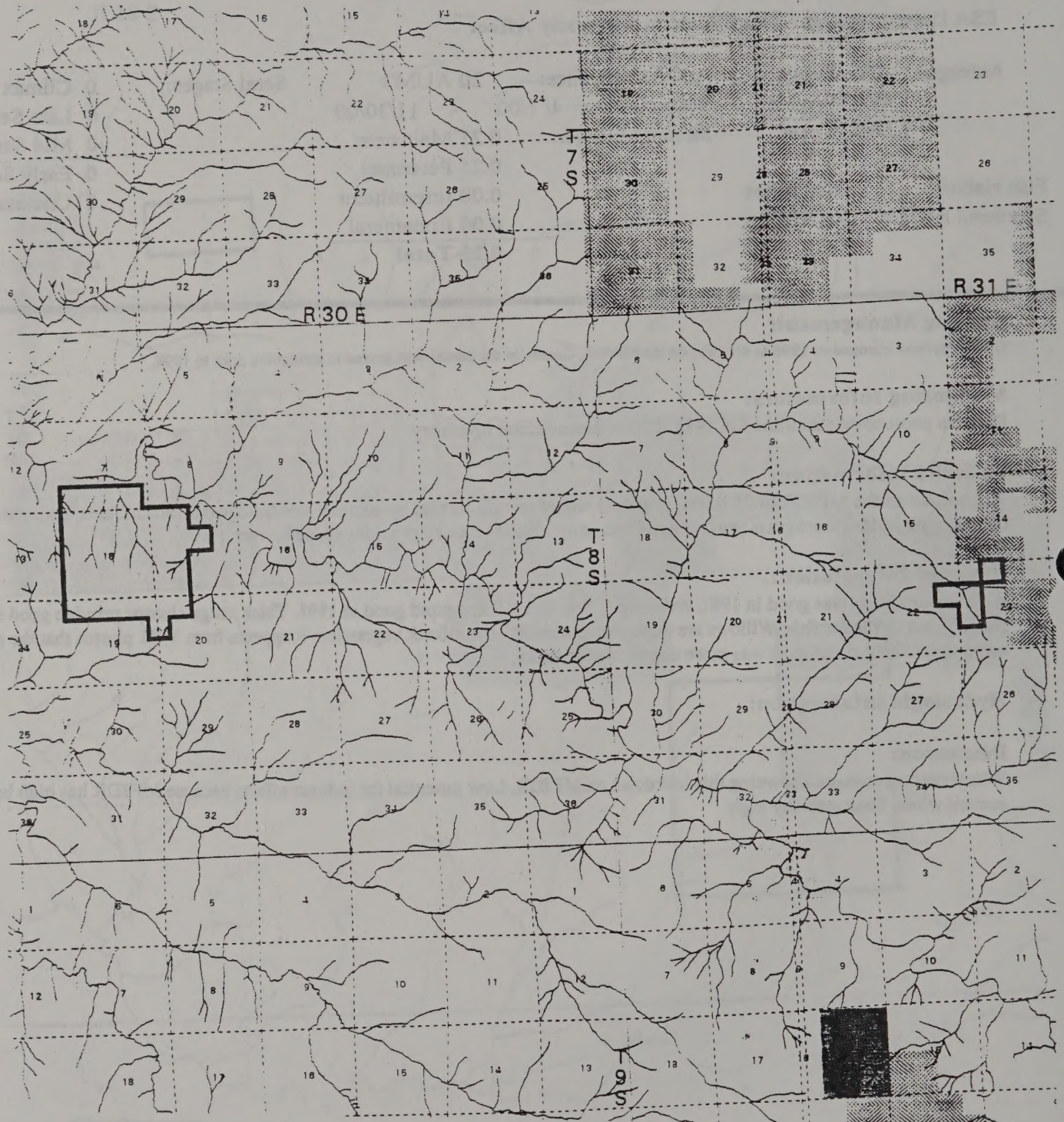
Riparian condition was good in 1981 inventory. Condition still appeared good in 1998. Thick sedge clumps provide good streambank stability and cover for fish. Willows are minor component of streambank vegetation. It appears from 1981 photos that the sedge component along riverbanks was more dominant than today.

Hydrologic Information:

Discussion:

Winter rearing area, no spawning this low down on MFJDR. Low potential for indirect effects because MFJDR has high bank rock content where bank stability high.

Gibson Creek Allotment #04135



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



136 BALDWIN GULCH

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 320 Public	Active Preference: 53 AUM's	Seral Stages:	0 Climax
1,967 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
<u>2,287 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.20 Perennial		0 Early Seral
Fish Habitat: 0.20 Miles	0.00 Intermittent		0 Unclassified
Steelhead Habitat: 0.20 Miles	<u>0.00 Ephemeral</u>		
	0.20 Total		

Grazing Management:

Grazing season of use changed in 1998 to 4/1-5/31. Poor forage plant composition, ground cover adequate from grasses.

Monitoring Information:

None.

Fisheries Information:

This section of Long Creek (0.2 miles) supports spawning and rearing habitat for summer steelhead.

Riparian Information:

Hot dry canyon and narrow riparian with scattered willows.

Hydrologic Information:

Discussion:

NOALE disposal. This allotment is an upland parcel with 0.1 mile of Baldwin Creek, an intermittent non-fish bearing drainage on west side. Long Creek is a steelhead spawning/rearing stream with 0.2 miles of habitat within the allotment. spawning occurs further upstream above Long Creek or in some of the larger tributaries. Summer rearing is marginal due to high stream temperatures. Indirect effects are minimal with early season use because of available upland water.

Baldwin Gulch Allotment #04136

R 29 E

23

22

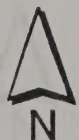
21

27

28

28

T 8 S



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



4139 BONE YARD

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,480	Public	Active Preference:	148 AUM's	Seral Stages:	0 Climax
19,300	Private	Season of Use: 5/ 1/00	- 11/30/00		0 Late Seral
<u>20,780</u>	Total	Stream Mileage:	0.00 Mainstem		0 Mid Seral
			0.00 Perennial		0 Early Seral
Fish Habitat:	0.00 Miles		4.00 Intermittent		0 Unclassified
Steelhead Habitat:	0.00 Miles		0.00 Ephemeral		
			<u>4.00 Total</u>		

Grazing Management:

Public lands contain a mix of rangeland and forest habitats, fairly dry. Modest to good forage and ground cover from bluebunch wheatgrass, Idaho fescue, cheatgrass, bromus spp. and prairie junegrass. Actual use in 1988 was 17 AUM's.

Monitoring Information:

Utilization data, one trend study.

Fisheries Information:

None, no potential.

Riparian Information:

None.

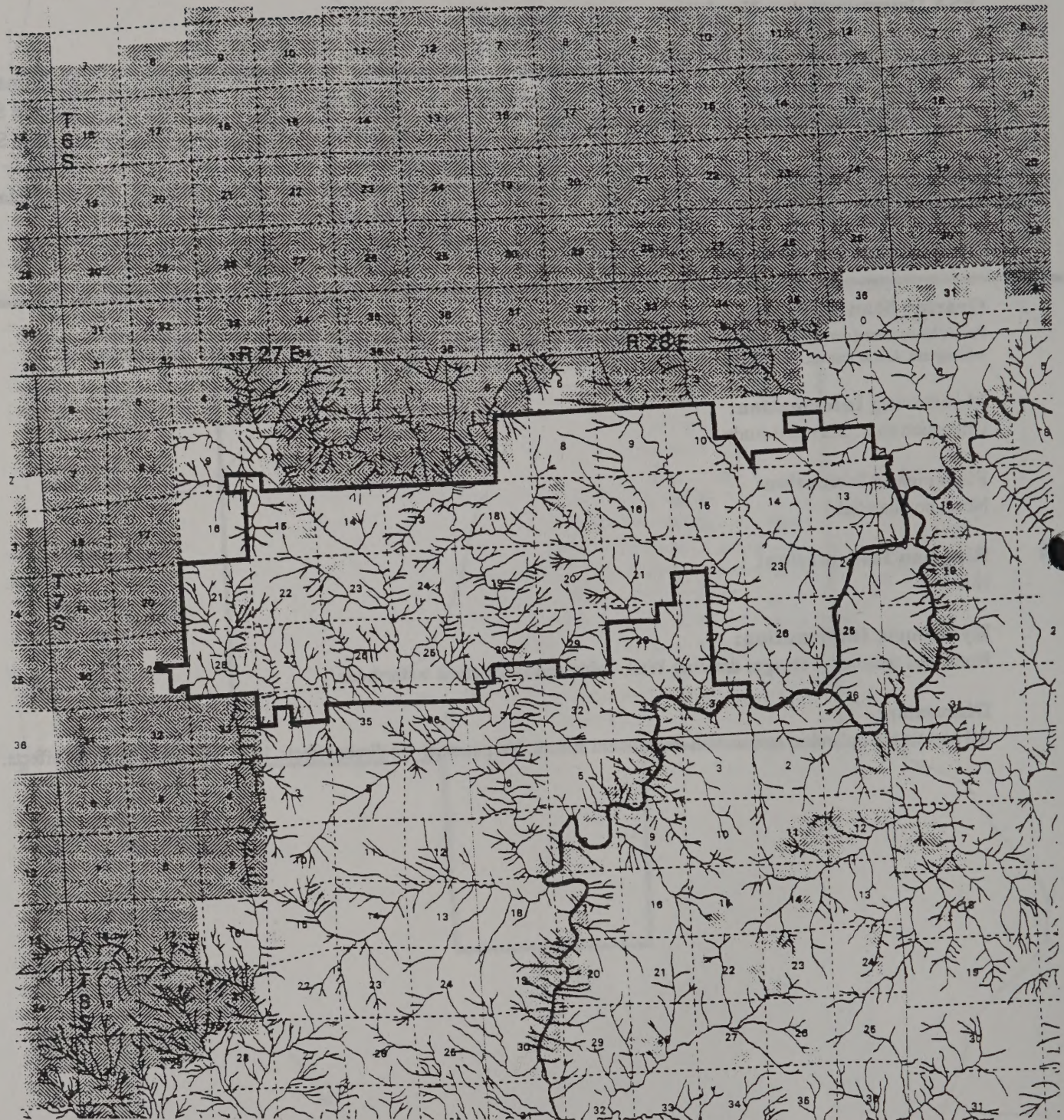
Hydrologic Information:

Numerous seasonal drainages draining Wall, Cabin and Ditch creek watersheds.

Discussion:

All parcels are upland in nature with intermittent stream. No potential for direct effects, low potential for indirect effects.

Bone Yard Allotment #04139



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



141 PINE CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 355 Public	Active Preference: 47 AUM's	Seral Stages: 0 Climax
40 Private	Season of Use: 4/ 1/00 - 11/30/00	0 Late Seral
395 Total	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.60 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	0.60 Total	

Grazing Management:

No data on actual grazing use. Allotment has modest forage and good ground cover. Mix of forested slopes and grassy/rocky knolls. Dominant grasses include bluegrass, bluebunch wheatgrass, cheat and rattlesnake grass.

Monitoring Information:

None.

Fisheries Information:

None, no potential.

Riparian Information:

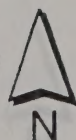
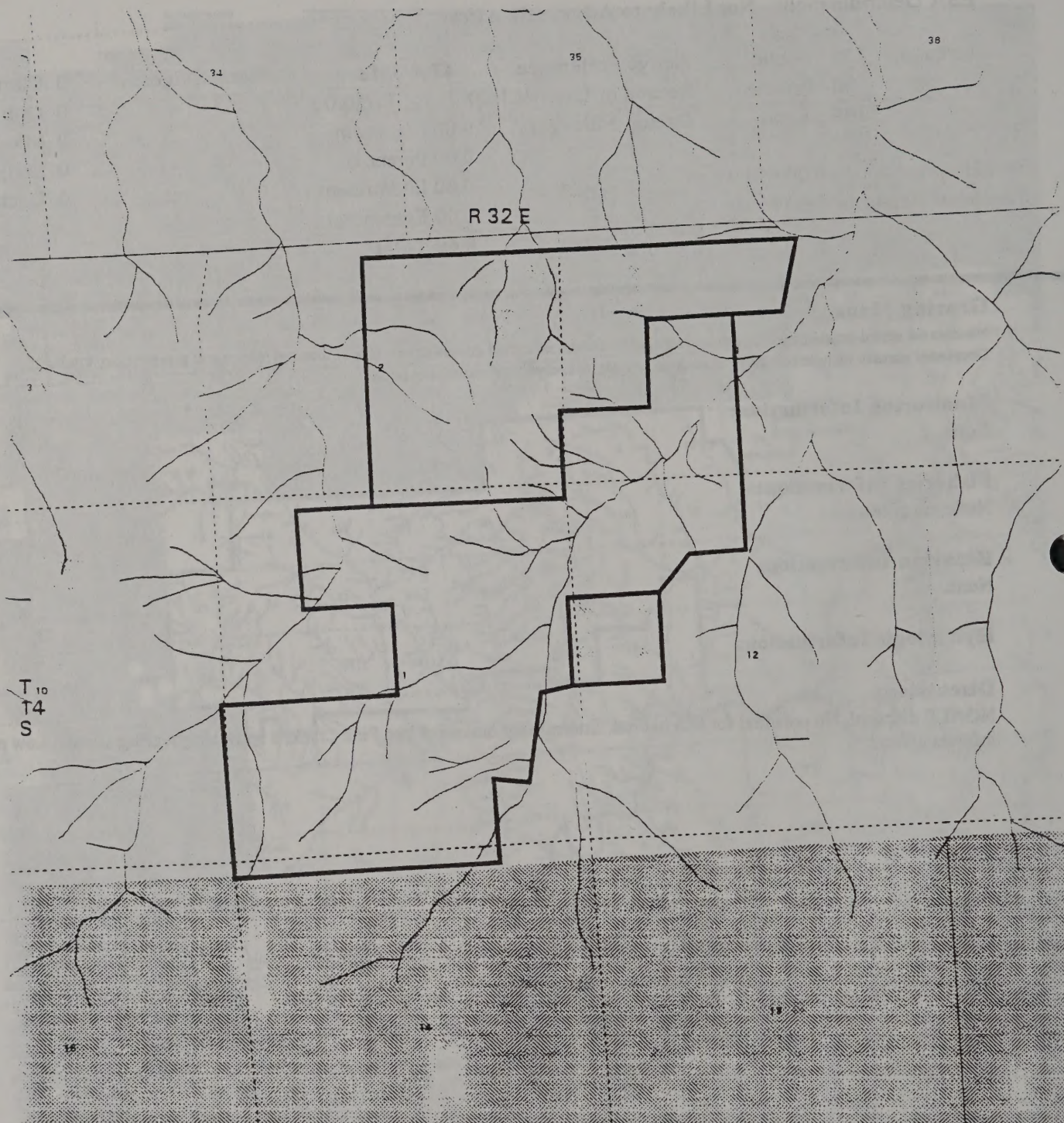
None.

Hydrologic Information:

Discussion:

NOALE disposal. No potential for fish habitat. Intermittent drainages into Pine Creek, a spawning/rearing stream. Low potential for indirect effects.

Pine Creek Allotment #04141



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



145 TWO COUNTY

ESA Determination: Not Likely to Adversely Affect

Acreage: 13,796 Public	Active Preference: 1,105 AUM's	Seral Stages: 0 Climax
12,750 Private	Season of Use: 4/ 1/00 - 11/30/00	33 Late Seral
<u>26,546 Total</u>	Stream Mileage: 2.00 Mainstem	34 Mid Seral
	7.90 Perennial	21 Early Seral
Fish Habitat: 3.10 Miles	30.80 Intermittent	12 Unclassified
Steelhead Habitat: 3.10 Miles	0.00 Ephemeral	
	<u>38.70 Total</u>	

Grazing Management:

Livestock are moved around the allotment with a rider. Actual use in AUM's: 1992 (400), 1996 (573), 1997 (436). Steep topography (deep canyon) of Rudio Creek limits livestock use along the creek. Use is generally light. Specific grazing use is as follows: 1 1/2 months of use within listed BLM parcels between 6/1-9/1: T10S R26E sec. 24 E1/2SE1/4, NW1/4 SE1/4 (Rudio Creek), Sec 25 E1/2E1/2 (Rudio Creek), Sec 36 SW1/4NE1/4, W1/2 SE (Rudio Creek)

1 1/2 months of use between 4/15-6/30, T10S R26E sec 5 NW 1/4 SE1/4 (Holmes Creek), Sec 9 S1/2NE1/4, SE 1/4 (Holmes Creek), Sec 15 S1/2NW1/4, N1/2SW1/4 (Burnt Corral)

4/15-5/31 for T10S R26E sec 7 SWNE1/4 John Day River, Sec 18 E1/2W1/2, W1/2NE1/4 NW1/4SE1/4 John Day River, Rose Creek, Bone Creek.

4/15-5/31 T10S R25E Sec 25 SW1/2 W1/2SE1/4 (McGinnis Creek), Sec 34 S1/2NE1/4 (McGinnis Creek), Sec 35 S1/2SE1/4 (Deep Creek)

4/15-5/31 T11S, R25E Sec 1 N1/2N1/2 (Harry Creek), Sec 2 SE1/4NE1/4 (Harry Creek)

Monitoring Information:

1981 riparian habitat inventory on Holmes, Rudio.

Fisheries Information:

4.8 miles non fish bearing. Branson Creek 3.0 miles intermittent. Rudio 1.5 miles on 3 segments fish bearing. Holmes Creek 1.8 miles - 1.0 fishbearing and perennial. Burnt Corral 0.6 miles fish bearing. Holmes Creek is considered steelhead habitat up to the mouth of Burnt Corral Creek. It provides fair habitat for steelhead rearing/spawning. Grazing pressure has trampled streambanks: limited vegetative cover along Holmes Creek, logging has removed some overstory conifers as well. Steelhead trout are reported utilize Burnt Corral Creek 0.6 miles, but this has not been verified by BLM and no information is available about its condition to support fish habitat. Rudio Creek provides good habitat for steelhead trout. About 1.5 miles of the stream in 3 separate segments i within this allotment. Stream temperatures meet state standards, large instream wood is fairly abundant, escape cover is good. Spawning gravel is limited given the stream gradient and dominance of cascade type stream habitat. Rainbow/steelhead trout here seen in common numbers during recent field assessments.

Riparian Information:

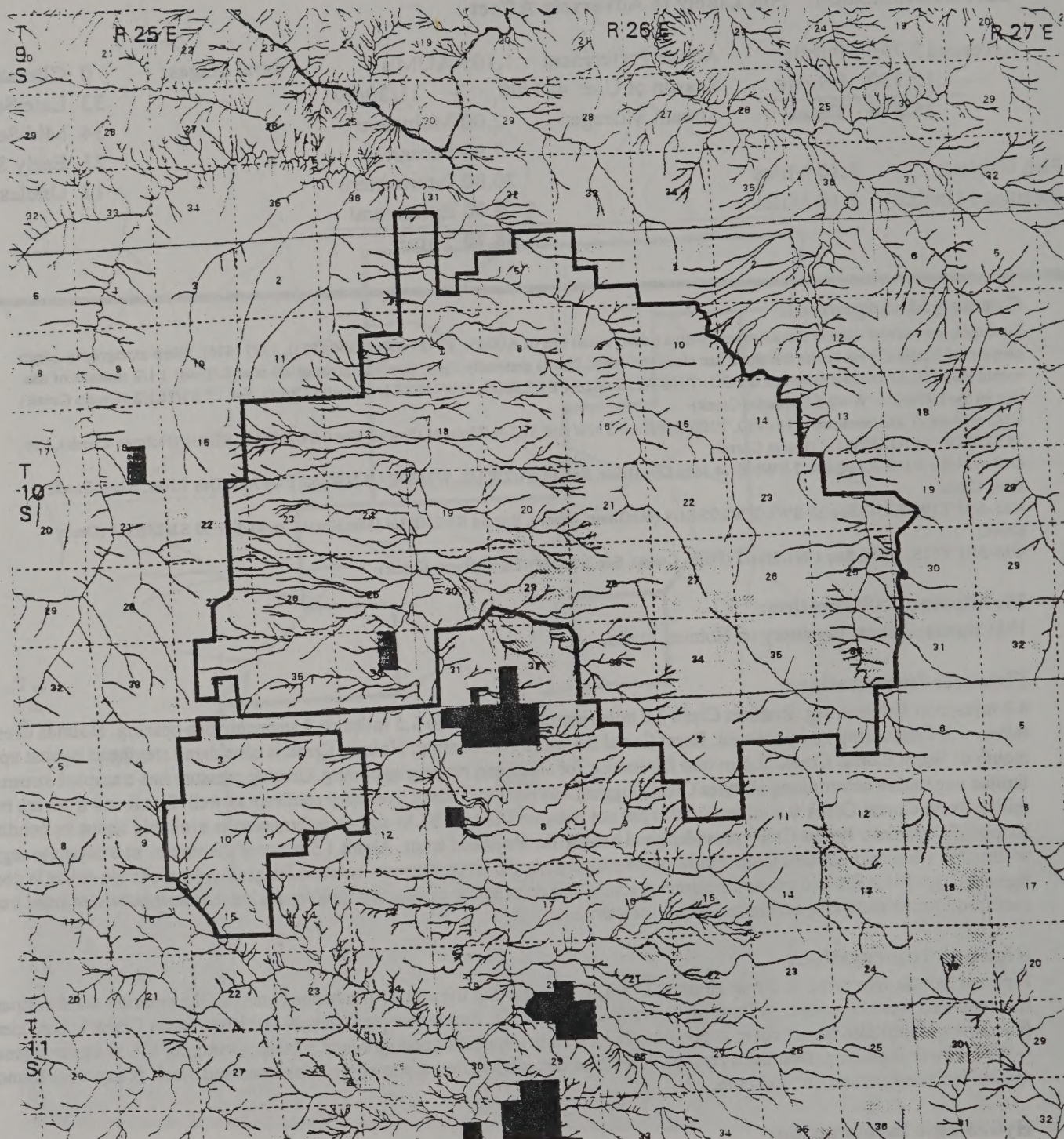
Riparian habitat was rated as fair in Hollmes Creek. Grazing along the stream has hedged many of the riparian shrubs. riparian species noted were dogwood, willow, mock orange, Douglas Fir, Ponderosa pine, juniper and ribes. rudio Creek is considered pro functioning condition. Shrub cover is good and bank stability appears good. gradient is steep, averaging 8% in upper segment and 4-5% in lower segments. Dominant riparian vegetation included willows, snowberry, dogwood and mock orange. Surrounding species included spruce, fir, and pine.

Hydrologic Information:

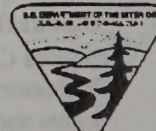
Discussion:

Holmes Creek has low potential for direct effect because of narrow steep channel and limited spawning gravel availability. Ripari vegetation is fair and bank stability is provided by bank rock content, some bank trampling has occurred. Rudio creek has limited access and direct effects are minimal with later season of use. No steelhead spawning/rearing are identified by ODFW on McGuinness, Rose, Bone or Harry Creeks. John DAY River is migratory and winter rearing habitat.

Two County Allotment #04145



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



154 MORGAN CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,847 Public	Active Preference: 370 AUM's	Seral Stages: 0 Climax
2,360 Private	Season of Use: 4/ 1/00 - 11/30/00	35 Late Seral
4,207 Total	Stream Mileage: 0.50 Mainstem	55 Mid Seral
	1.20 Perennial	10 Early Seral
Fish Habitat: 1.20 Miles	2.20 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	3.40 Total	

Grazing Management:

Pasture with Indian creek will be grazed 4/15-5/31. Actual use in AUM's 1991 (231), 1992 (175), 1993 (415), 1994 (685) and 1997 (228). Uplands are juniper/shrub/bunchgrass community type. Grasses provide 30% ground cover, juniper 10%, exposed soil/rock 50%. Forage and cover is much better in vicinity of Indian Creek drainage, more grass cover.

Monitoring Information:

None.

Fisheries Information:

Indian creek is suspected to support redband trout habitat, but this is not confirmed. The SFJDR contain redband trout and nongame species. No steelhead habitat within allotment.

Riparian Information:

The allotment contains 1 mile of Indian Creek, a perennial stream, in two segments separated by private land. The riparian condition of Indian creek is functioning at risk, with a diverse vegetative community of aspen, willows, dogwoods and a conifer overstory. The channel has low to moderate amounts of large woody debris. There is 0.2 miles of the SFJDR which meanders back and forth between public and private lands. No information about condition.

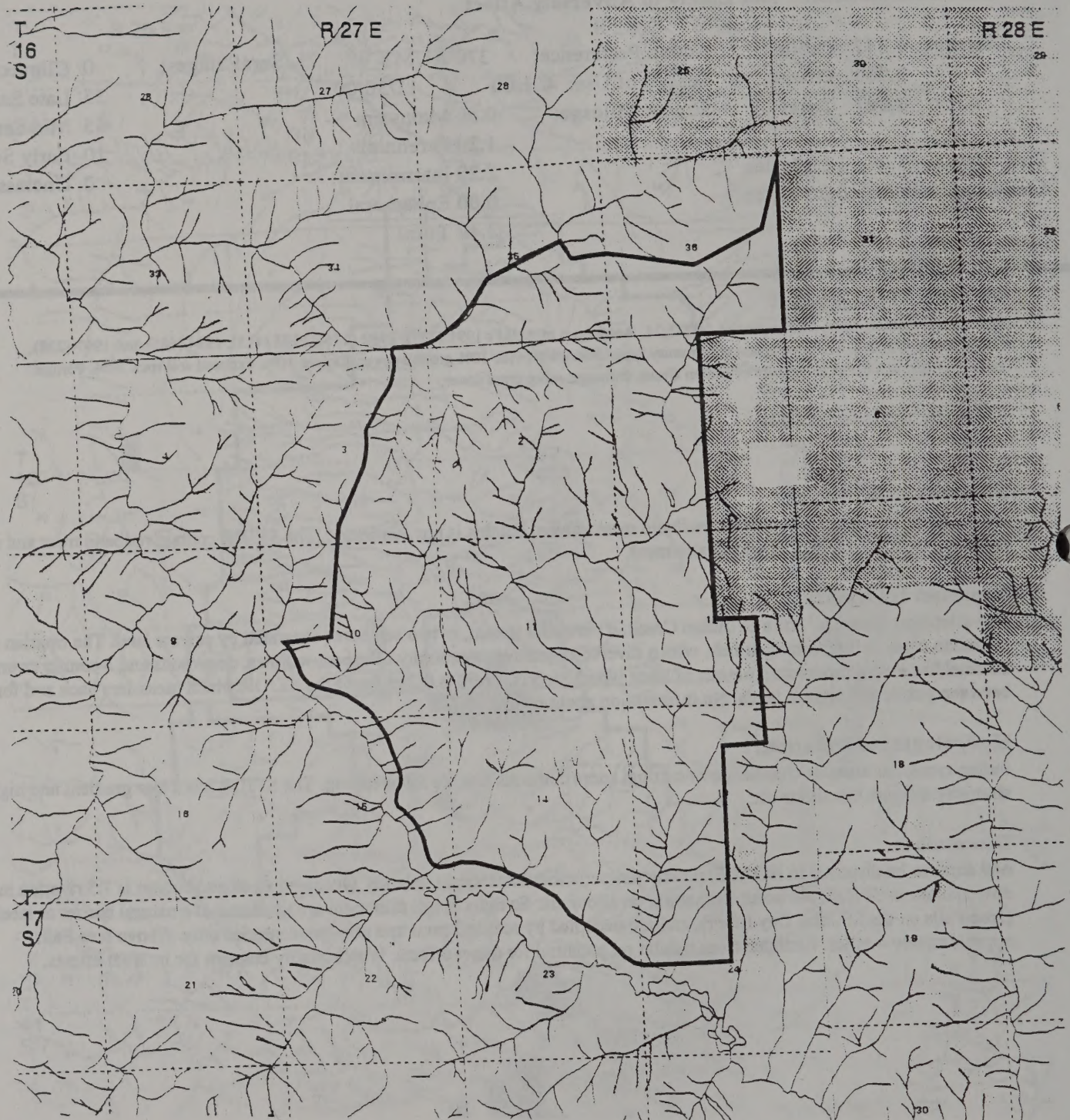
Hydrologic Information:

Indian creek has areas of channel downcutting, some cutbanks that are revegetating. The SFJDR has a low gradient and high sinuosity through the allotment.

Discussion:

640 acres to be disposed in NOALE, mostly juniper/shrub/bunchgrass uplands. Occupied steelhead habitat is 7.5 riverine miles downstream in SFJDR. No occupied habitat on allotment. Streams in this allotment are upstream of a natural barrier to steelhead trout (Izee Falls on the SF John Day River), and are occupied by redband trout and non-game species only. Above Izee Falls, approximately 4 miles. Redband trout habitat no potential for direct effects. Water quality concern for indirect effects.

Morgan Creek Allotment #04154



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



55 BLACKHORSE DRAW

ESA Determination: **Not Likely to Adversely Affect**

Acreage:	0 Public	Active Preference:	0 AUM's	Seral Stages:	0 Climax
	0 Private	Season of Use: 4/ 1/00	- 11/30/00		0 Late Seral
	0 Total	Stream Mileage:	0.00 Mainstem		0 Mid Seral
			1.90 Perennial		0 Early Seral
Fish Habitat:	0.00 Miles		6.20 Intermittent		0 Unclassified
Steelhead Habitat:	0.00 Miles		0.00 Ephemeral		
			8.10 Total		

Grazing Management:

Eight pastures with BLM, Utley Creek area grazed 4/15-5/31 since 1991. Pasture with SFJDR is not being grazed. Actual use in AUM's 1990(248), 1991 (241), 1993 (448), 1995 (323) and 1998 (287).

Monitoring Information:

Riparian photopoint on Utley Creek, utilization, three trend studies. 1981, 1988 habitat inventories.

Fisheries Information:

In 1988 Utley Creek was rated as poor for instream aquatic habitat, cutbanks line mouth of the creek length, but the stream has formed a new floodplain within the cutbanks. Little large woody debris exist in channel. Willow recruitment is increasing and sedge and grasses in the floodplain are dominating. Redband trout are present in Utley, Flat creeks and the SFJDR.

Riparian Information:

The BLM land contains about 0.2, and 1.6 miles of the SFJDR and Utley creeks respectively, all perennial streams. These stream segments were inspected in 1993. Willows were common in Utley creek. No information on condition of SFJDR.

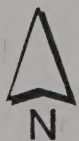
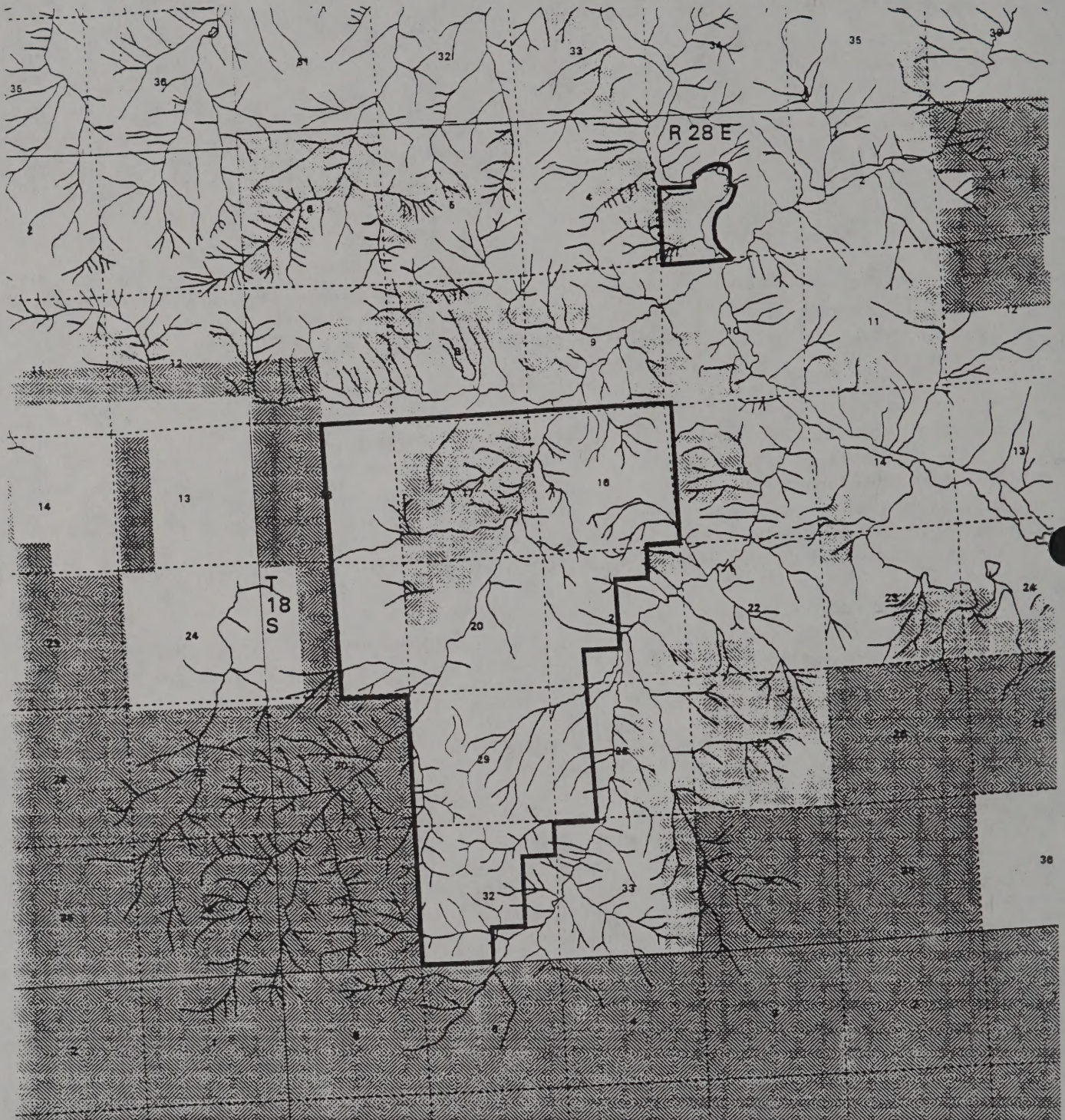
Hydrologic Information:

Utley has a very high sinuosity. Banks are sloped well vegetated with grass below some cutbanks. Fair stream channel stability. condition of Utley creek has improved since 1981 inventories.

Discussion:

All NOALE disposal except 200 acres near SFJDR. Allotment is over 20 riverine miles upstream of occupied steelhead habitat in SFJDR. Streams in this allotment are upstream of a natural barrier to steelhead trout (Izee Falls on the SF John Day River), and are occupied by redband trout and non-game species only. This allotment is approximately 20 miles above Izee falls. Potential water quality indirect effects to downstream rearing/spawning habitat. Habitat for redband fair to good in Utley Creek and SFJDR. High summer temperatures limits potential at this time.

Black Horse Draw Allotment #04155



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



'56 RUDIO CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 2.328 Public	Active Preference: 369 AUM's	Seral Stages: 0 Climax
5,640 Private	Season of Use: 4/ 1/00 - 11/30/00	14 Late Seral
<u>7,968 Total</u>	Stream Mileage: 0.00 Mainstem	48 Mid Seral
	1.40 Perennial	13 Early Seral
Fish Habitat: 1.40 Miles	3.20 Intermittent	25 Unclassified
Steelhead Habitat: 1.40 Miles	0.00 Ephemeral	
	<u>4.60 Total</u>	

Grazing Management:

Livestock are rotated through nine pastures each year with BLM lands being grazed between 4/15 - 11/30. From 1984 to 1997 actual use has averaged 142 AUM's ranging from 19 to 281 AUM's. The segments of Rudio Creek is within one pasture. The Ferrins pasture which contains Rudio Creek is grazed for one month between 7/15 and 9/1. Livestock access to stream is limited due to steep topography, boulders, and lack of desirable forage grasses along the stream.

Monitoring Information:

Water temperature, riparian photopoints, four trend studies and utilization. Water quality analysis in 1988. Riparian habitat inventory in 1981.

Fisheries Information:

This section of Rudio creek appears to be in good condition. The stream has good habitat complexity, a diversity of riparian vegetation, moderate amounts of large instream wood. Overstory of conifer trees and cottonwood trees provide moderate shade adding to shade from the stream's narrow, deep canyon. Steelhead trout (juvenile) observed in abundance during 1993 field assessment. 1999 redd count found only 1 redd near lower BLM boundary. BLM stream segments are not very suitable for spawning habitat. The stream is steep, with cascades, falls, boulders and several falls may limit steelhead passage except at very high flows. Mainly rearing habitat. Water temps usually meet state standards of 64 degrees or less.

Riparian Information:

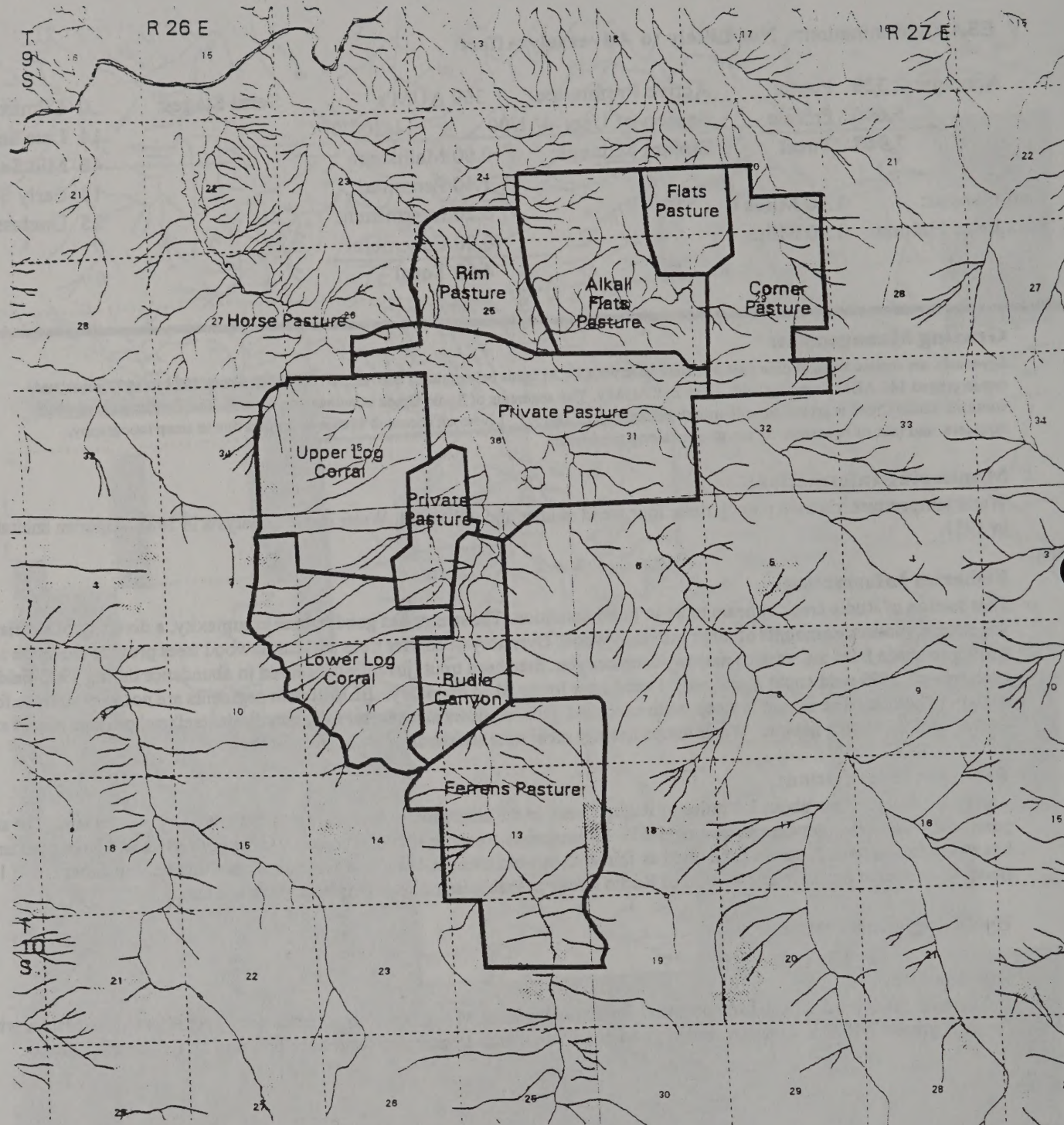
The BLM lands contain about 1.4 miles of Rudio Creek in the allotment, in two segments, separated by private land. The stream is perennial with stream gradient averaging 5-6%. Streambanks are quite stable, secured by tree/shrub roots and large boulders. Stream has many steep pools. Riparian zone rated as fair with upward trend in 1981, and rated as proper functioning condition in 1995. Because of stream gradient, this section of Rudio Creek probably isn't a spawning concentration area.

Hydrologic Information:

Discussion:

960 acres in NOALE disposal. Low potential for spawning in BLM segment. No potential for direct effect since pasture with Rudio Creek is grazed 7/15-9/1. Riparian area in good condition. Upland water sources reduce pressure on fish-bearing stream.

Rudio Creek Allotment #04156



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



'58 FALL MTN.

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 280 Public	Active Preference: 35 AUM's	Seral Stages: 0 Climax
720 Private	Season of Use: 8/ 1/00 - 11/30/00	0 Late Seral
<u>1,000 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.60 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>0.60 Total</u>	

Grazing Management:

Allotment usually grazed from 6/15-10/15. Good ground cover, dominated (50-60%) by grasses. Good forage.

Monitoring Information:

None.

Fisheries Information:

None, no potential.

Riparian Information:

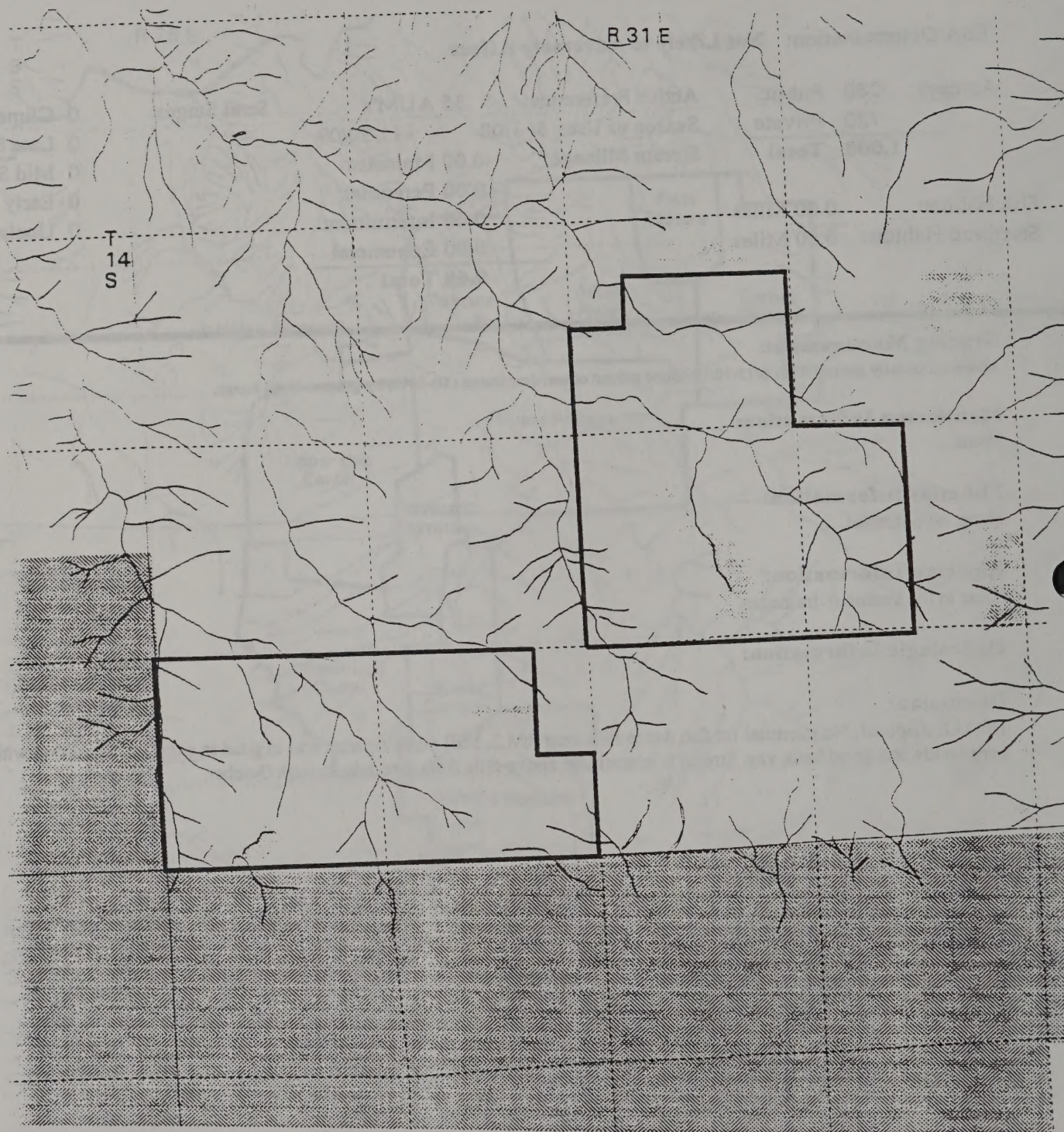
None in the seasonal drainages.

Hydrologic Information:

Discussion:

NOALE disposal. No potential for fish due to falls near RM 2. Mill creek riparian area in good to excellent condition with heavy hardwoods and good bank veg. Stream is intermittent above falls from late July through October.

Fail Mountain Allotment #04158



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



164 CORRAL GULCH

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 2,653	Public	Active Preference:	318 AUM's	Seral Stages:	0 Climax
	0 Private	Season of Use: 5/ 1/00	- 6/15/00		0 Late Seral
<u>2,653</u>	Total	Stream Mileage:	0.00 Mainstem		38 Mid Seral
			0.00 Perennial		53 Early Seral
Fish Habitat:	0.00 Miles		5.60 Intermittent		9 Unclassified
Steelhead Habitat:	0.00 Miles		0.00 Ephemeral		
			<u>5.60</u>		Total

Grazing Management:

Monitoring Information:

Fisheries Information:

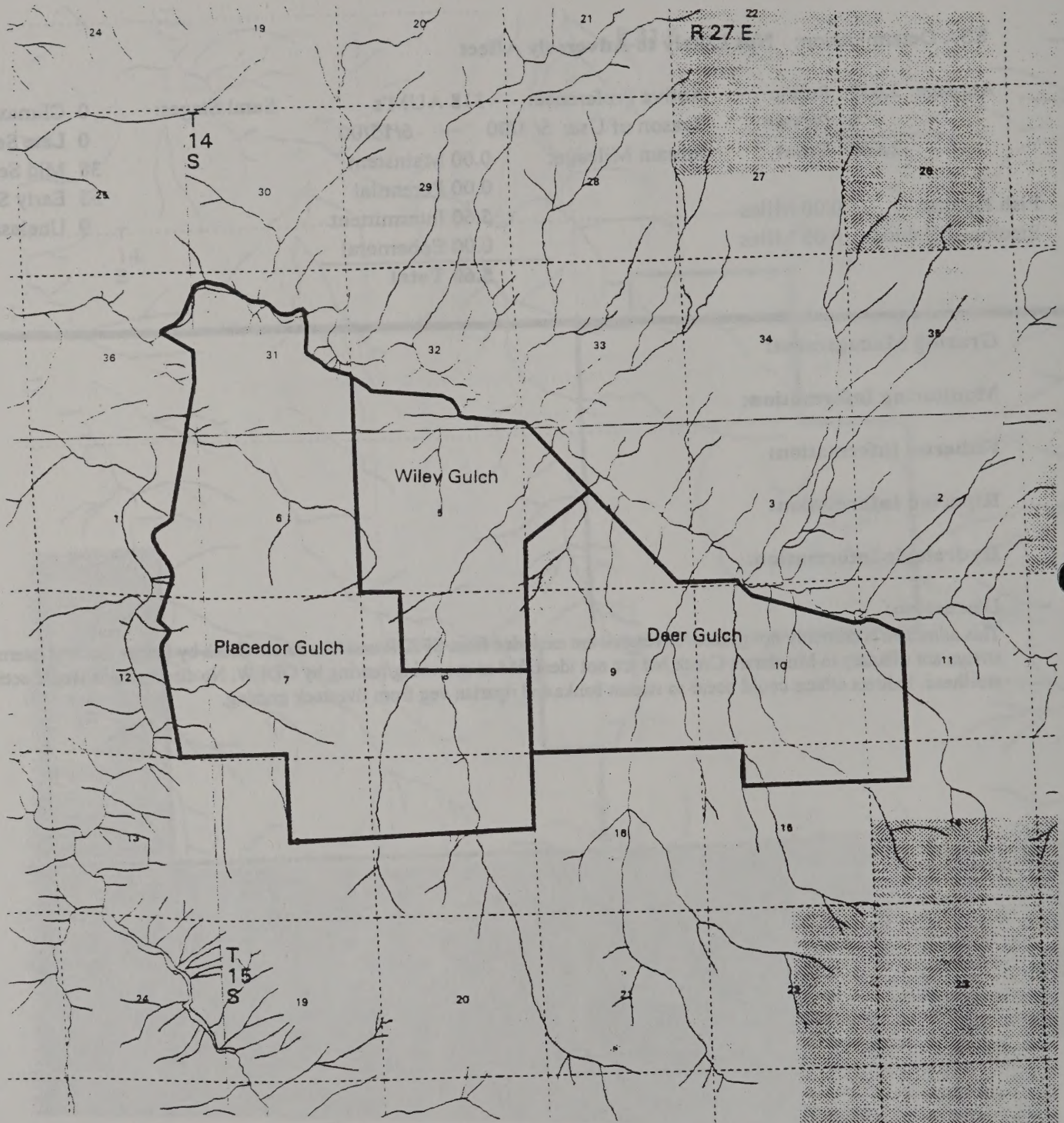
Riparian Information:

Hydrologic Information:

Discussion:

This allotment is currently not grazed. Livestock are excluded from SFJDR and Murderers Creek by fences. Several intermittent stream are tributary to Murderers Creek but are not identified as spawning/rearing by ODFW. No direct effects would occur to steelhead. Indirect effects could occur to stream banks and riparian veg from livestock grazing.

Corral Gulch Allotment #04164



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



167 QUARRY

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 200 Public	Active Preference: 20 AUM's	Seral Stages: 0 Climax
0 Private	Season of Use: 4/ 1/00 - 6/ 1/00	0 Late Seral
<u>200 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.40 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.00 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>0.40 Total</u>	

Grazing Management:

No data on actual use. Rangeland habitat with juniper (1--20%), shrubs, forbes and grasses. About 20% bare soil and rock.

Monitoring Information:

None.

Fisheries Information:

E. Fork Cottonwood Creek contains water but no fish according to ODF&W inventories.

Riparian Information:

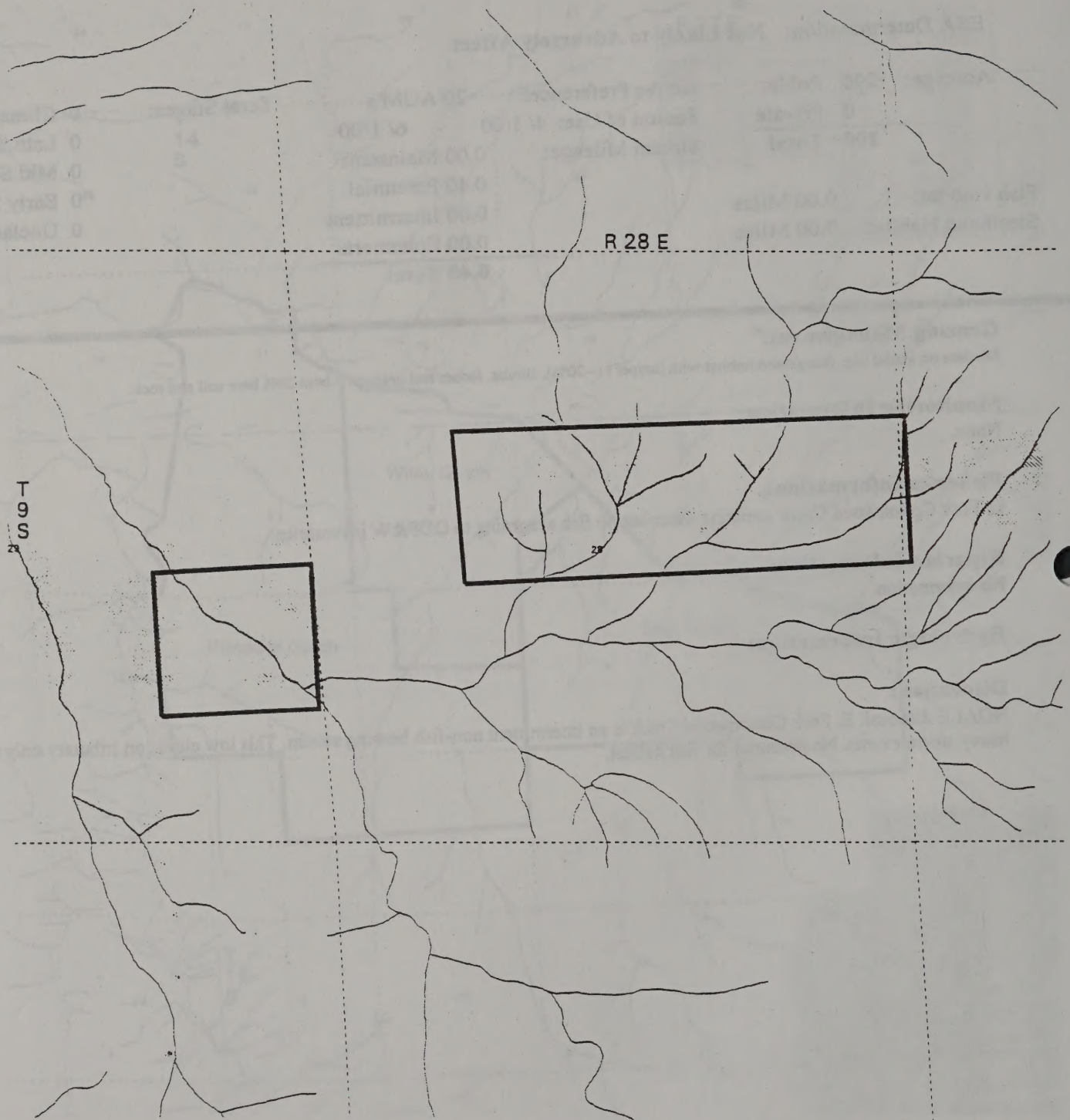
No information.

Hydrologic Information:

Discussion:

NOALE disposal. E. Fork Cottonwood Creek is an intermittent non-fish bearing stream. This low elevation tributary only runs during heavy storm events. No potential for fish habitat.

Quarry Allotment #04167



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



172 CUMMINGS FORK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 320 Public	Active Preference: 40 AUM's	Seral Stages: 0 Climax
800 Private	Season of Use: 4/ 1/00 - 11/30/00	0 Late Seral
<u>1,120 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.40 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>0.40 Total</u>	

Grazing Management:

No actual use data. Uplands appear to be in good condition.

Monitoring Information:

None.

Fisheries Information:

None, no potential.

Riparian Information:

None, no potential.

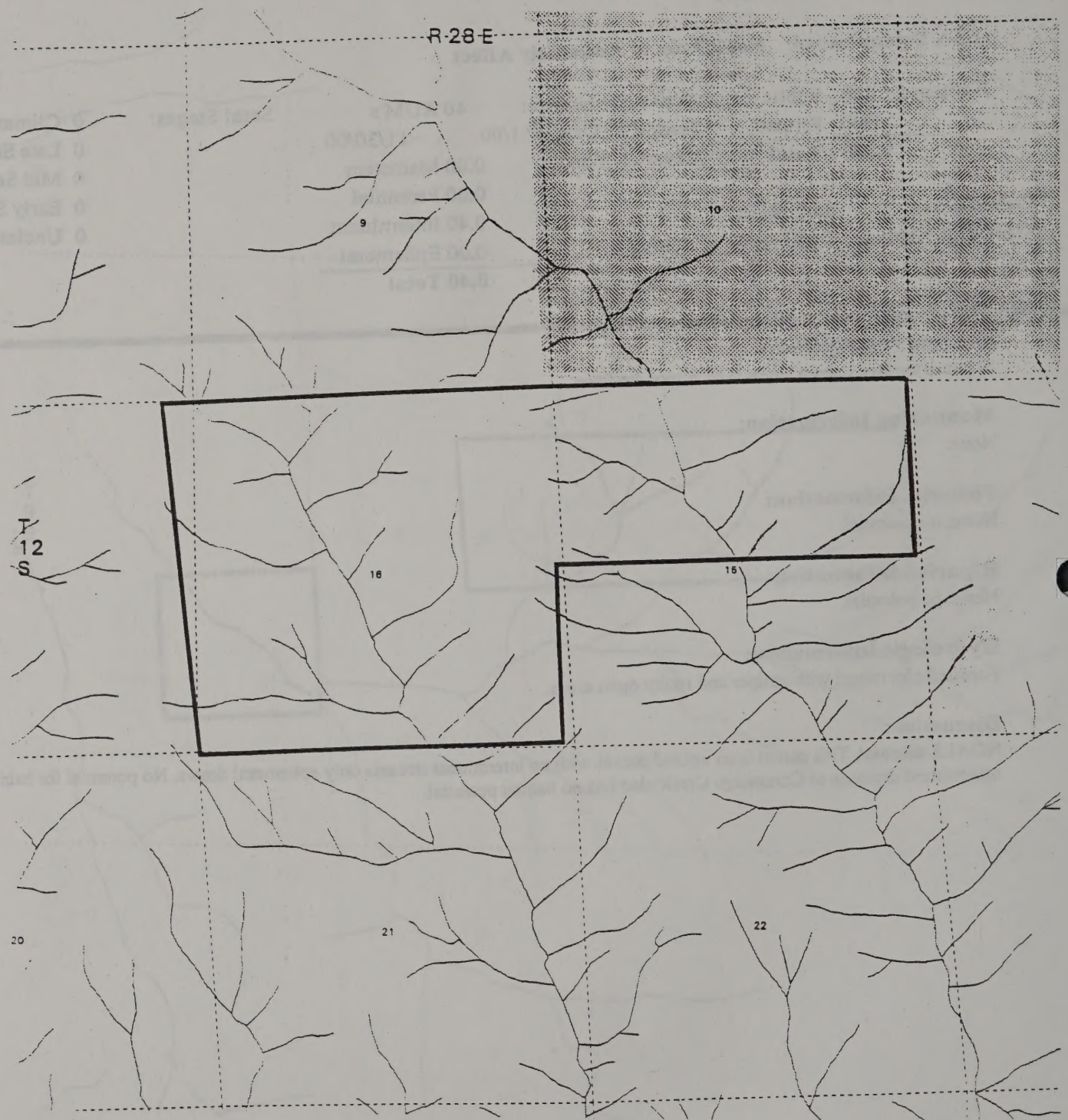
Hydrologic Information:

Forested plot mixed with juniper and rocky open areas.

Discussion:

NOALE disposal. This parcel is an upland parcel with no intermittent streams only ephemeral draws. No potential for habitat. The intermittent drainage to Cummings Creek also has no habitat potential.

Cummings Fork Allotment #04172



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



'74 REYNOLDS CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 157 Public	Active Preference: 10 AUM's	Seral Stages:	0 Climax
1,500 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
<u>1,657 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.00 Perennial		0 Early Seral
Fish Habitat: 0.00 Miles	0.10 Intermittent		0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral		
	<u>0.10 Total</u>		

Grazing Management:

No information on actual use. Good forage in this forested plot, primarily elk sedge.

Monitoring Information:

None.

Fisheries Information:

None, no potential.

Riparian Information:

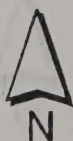
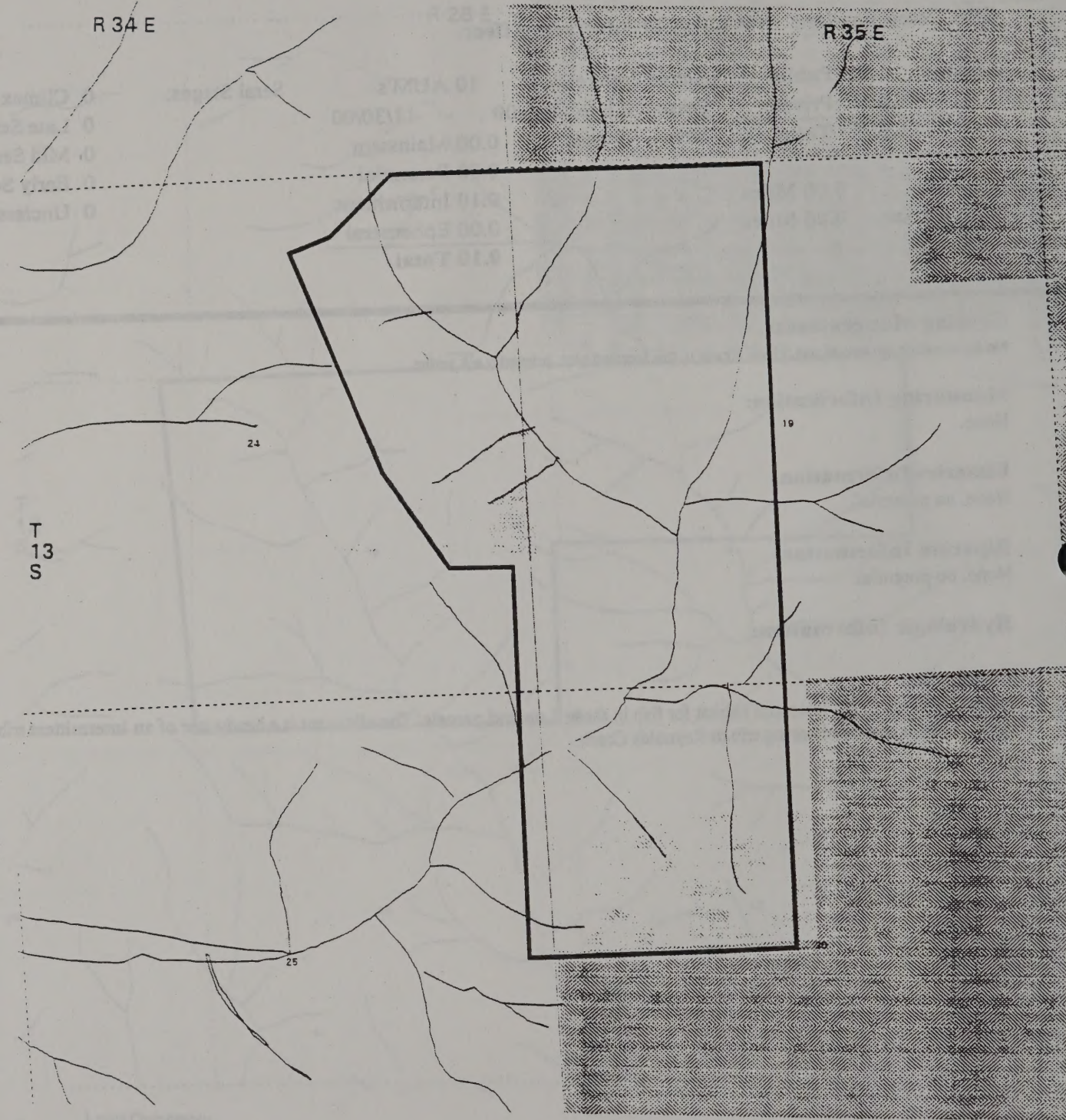
None, no potential.

Hydrologic Information:

Discussion:

NOALE disposal. No potential habitat for fish in these 2 upland parcels. The allotment is a headwater of an intermittent tributary to Axe Gulch, a non-fishbearing trib to Reynolds Creek.

Reynolds Creek Allotment #04174



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



76 DICK CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 1,000 Public	Active Preference: 227 AUM's	Seral Stages:	0 Climax
2,500 Private	Season of Use: 4/ 1/00 - 11/30/00		0 Late Seral
<u>3,500 Total</u>	Stream Mileage: 0.00 Mainstem		0 Mid Seral
	0.80 Perennial		0 Early Seral
Fish Habitat: 0.80 Miles	3.20 Intermittent		0 Unclassified
Steelhead Habitat: 0.80 Miles	0.00 Ephemeral		
	<u>4.00 Total</u>		

Grazing Management:

Since 1990 the allotment has been grazed between 4/15 and 10/15. Actual use in 1992 (99 AUM's), 93 (55 AUM's) 94 (56 AUM's) and in 1996 (87 AUM's)

Grazing is from 4/15-5/31 on T11S, R26E Sec 20, NE1/4SE1/4, Sec 21 NW1/4SW1/4, Sec 28 SW1/4NE1/4

Monitoring Information:

Utilization data, one trend study.

Fisheries Information:

It is not confirmed if steelhead use Dick Creek, but probably it is potential habitat. 1981 assessment found no fish. ODF&W inventory data does not designate Dick Creek as steelhead habitat.

Riparian Information:

A field assessment of Dick Creek in 1981 rated the riparian condition of Dick creek as very poor, nearly devoid of any riparian species. Scattered birch and a few birch were observed.

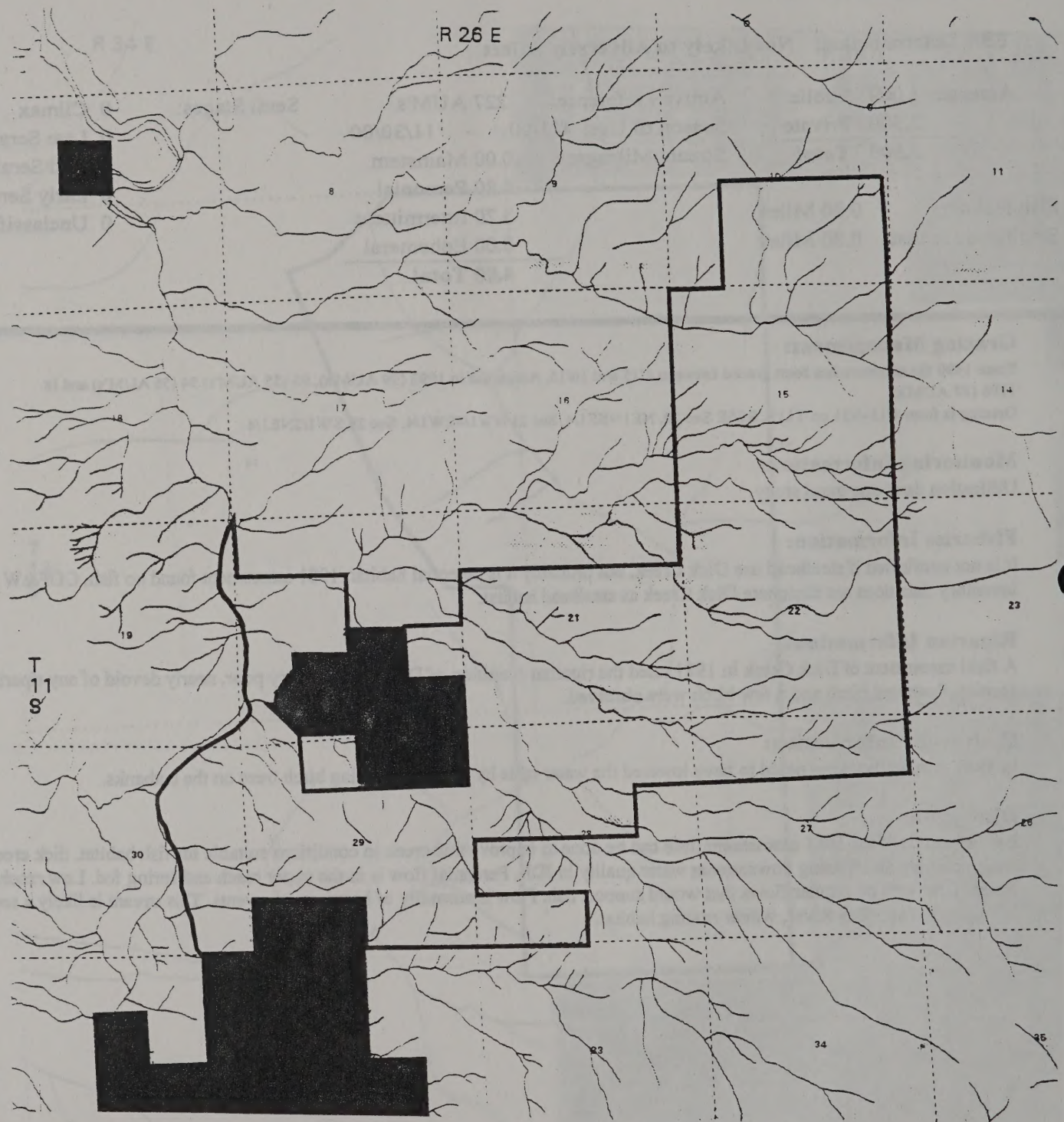
Hydrologic Information:

In 1981 deep gullies were noted to have lowered the water table by 20-30', stranding birch trees on the cutbanks.

Discussion:

By the sounds of the 1981 assessment little can be done to improve this creek to conditions suitable for fish habitat. Dick creek's poor condition may be affecting downstream water quality in JDR. Perennial flow is in the upper reach and spring fed. Low reaches are intermittent with no regular flows that would support fish. Flow is normally of heavy storm events. This stream is likely a sediment influence to John Day River, winter rearing habitat.

Dick Creek Allotment #04175 4176



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



181 DOG CREEK RIDGE

ESA Determination: **Not Likely to Adversely Affect**

Acreage: 120 Public	Active Preference: 8 AUM's	Seral Stages: 0 Climax
180 Private	Season of Use: 6/ 1/00 - 9/ 1/00	0 Late Seral
<u>300 Total</u>	Stream Mileage: 0.00 Mainstem	0 Mid Seral
	0.00 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.30 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	<u>0.30 Total</u>	

Grazing Management:

No data on actual grazing use.

Monitoring Information:

None.

Fisheries Information:

None, no potential.

Riparian Information:

None, no potential.

Hydrologic Information:

BLM lands are forested with good understory vegetation.

Discussion:

NOALE disposal. Both upland parcels with intermittent drainage to Dog Creek. No potential habitat for fish. Private lands on Dog Creek identified as fish bearing but has limited potential. No potential for direct effects and indirect effects.

Dog Creek Ridge Allotment #04181

R 32 E

T 14 S



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



184 PASS CREEK

ESA Determination: **Not Likely to Adversely Affect**

Acreage:	80 Public	Active Preference:	10 AUM's	Seral Stages:	0 Climax
	3,750 Private	Season of Use:	4/ 1/00 - 11/30/00		0 Late Seral
	3,830 Total	Stream Mileage:	0.00 Mainstem		0 Mid Seral
			0.00 Perennial		0 Early Seral
Fish Habitat:	0.00 Miles		0.30 Intermittent		0 Unclassified
Steelhead Habitat:	0.00 Miles		0.00 Ephemeral		
			0.30 Total		

Grazing Management:

No actual use Data.

Monitoring Information:

None.

Fisheries Information:

None, no potential.

Riparian Information:

None.

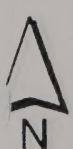
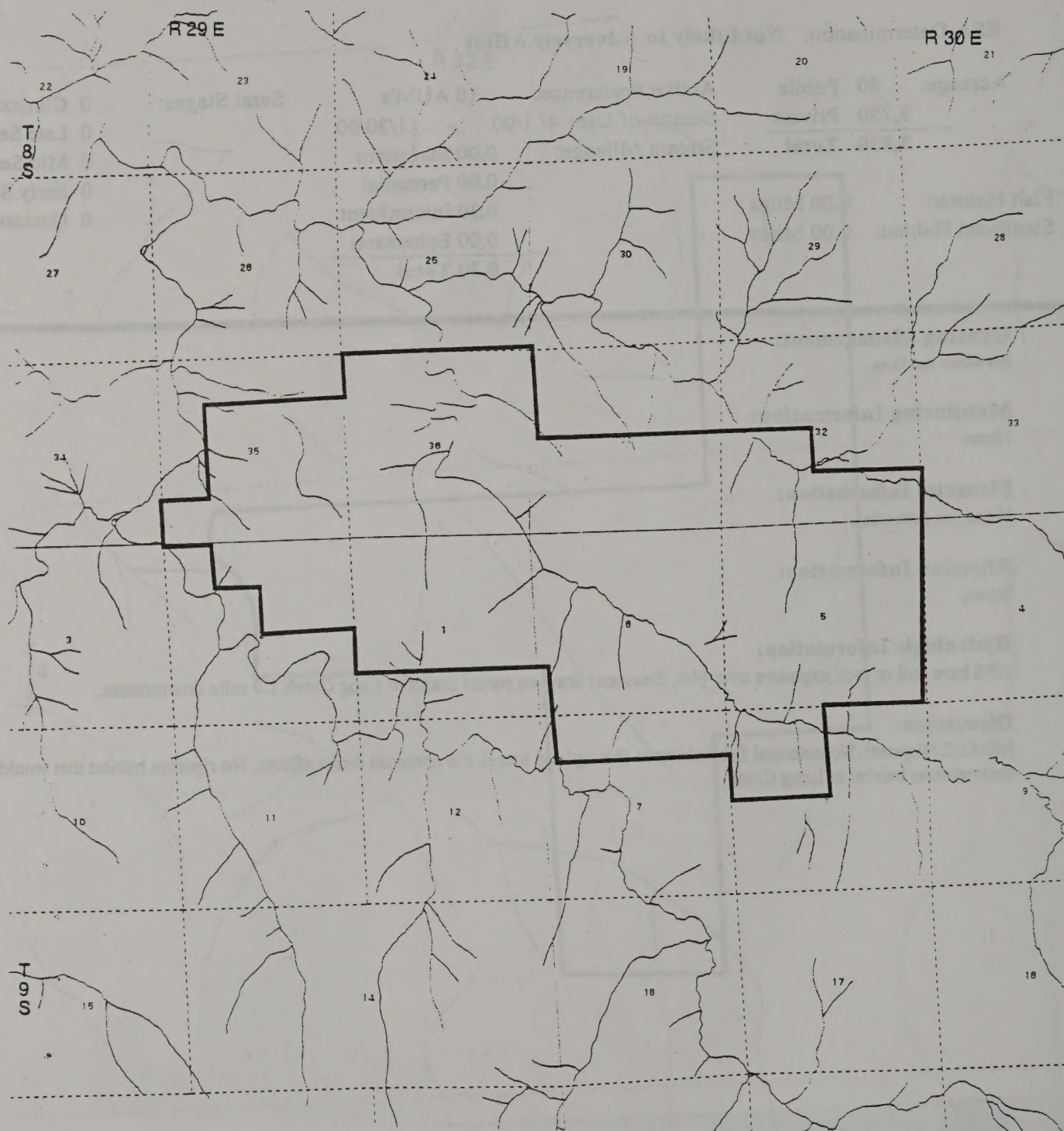
Hydrologic Information:

40% bare soil or rock exposure over plot. Seasonal draw on parcel drains to Long Creek 1.0 mile downstream.

Discussion:

NOALE Disposal. No potential fish habitat in this upland parcel. No potential direct effects. No riparian habitat that would affect downstream habitat in Long Creek.

Pass Creek Allotment #04184



Land Ownership
BLM Land
USFS Land
CTWS Land
National Park
State Land



186 BIG FLATS

ESA Determination: Not Likely to Adversely Affect

Acreage: 3,637 Public	Active Preference: 200 AUM's	Seral Stages: 0 Climax
6,163 Private	Season of Use: 4/15/00 - 11/30/00	0 Late Seral
9,800 Total	Stream Mileage: 0.60 Mainstem	0 Mid Seral
	1.50 Perennial	0 Early Seral
Fish Habitat: 0.00 Miles	0.90 Intermittent	0 Unclassified
Steelhead Habitat: 0.00 Miles	0.00 Ephemeral	
	2.40 Total	

Grazing Management:

Since 1995 the allotment has been grazed from 6/1 to 11/30. Actual use in 1992 (327 AUM's) and 1997 (47 AUM's).

Grazing is from 6/1-6/30 on T16S, R27E Sec 33 W1/2SW1/4 (S.F. John Day River), T17S, R27E Sec 3 N1/2NE1/4 (Indian Creek), Sec 4 E1/2NW1/4, NE1/4SW1/4 (S.F. John Day River), Sec 9 NW1/4NE1/4, SE1/4NE1/4

Monitoring Information:

Two trend studies, utilization study, water temperature monitoring in the SFJDR.

Fisheries Information:

This section of the SFJDR appears to be in good condition. The river is moderately deep and narrow, meandering with dense riparian cover over much of the streambanks. Water quality problems that occur in this segment of the SFJDR are water temperatures and high sediment levels which appear to be primarily from upstream sources. Fish species in the allotment include redband trout and nongame species.

Riparian Information:

The public land contains about 0.6 miles of the SFJDR, in three segments, separated by private land. There is also two segments ABbot creek, separated by another grazing allotment. The riparian zone of the SFJDR is in proper functioning condition. Riparian vegetation is dominated by dogwoods, willows, and shrubs. In some areas the vegetation is quite dense on both sides of the river.

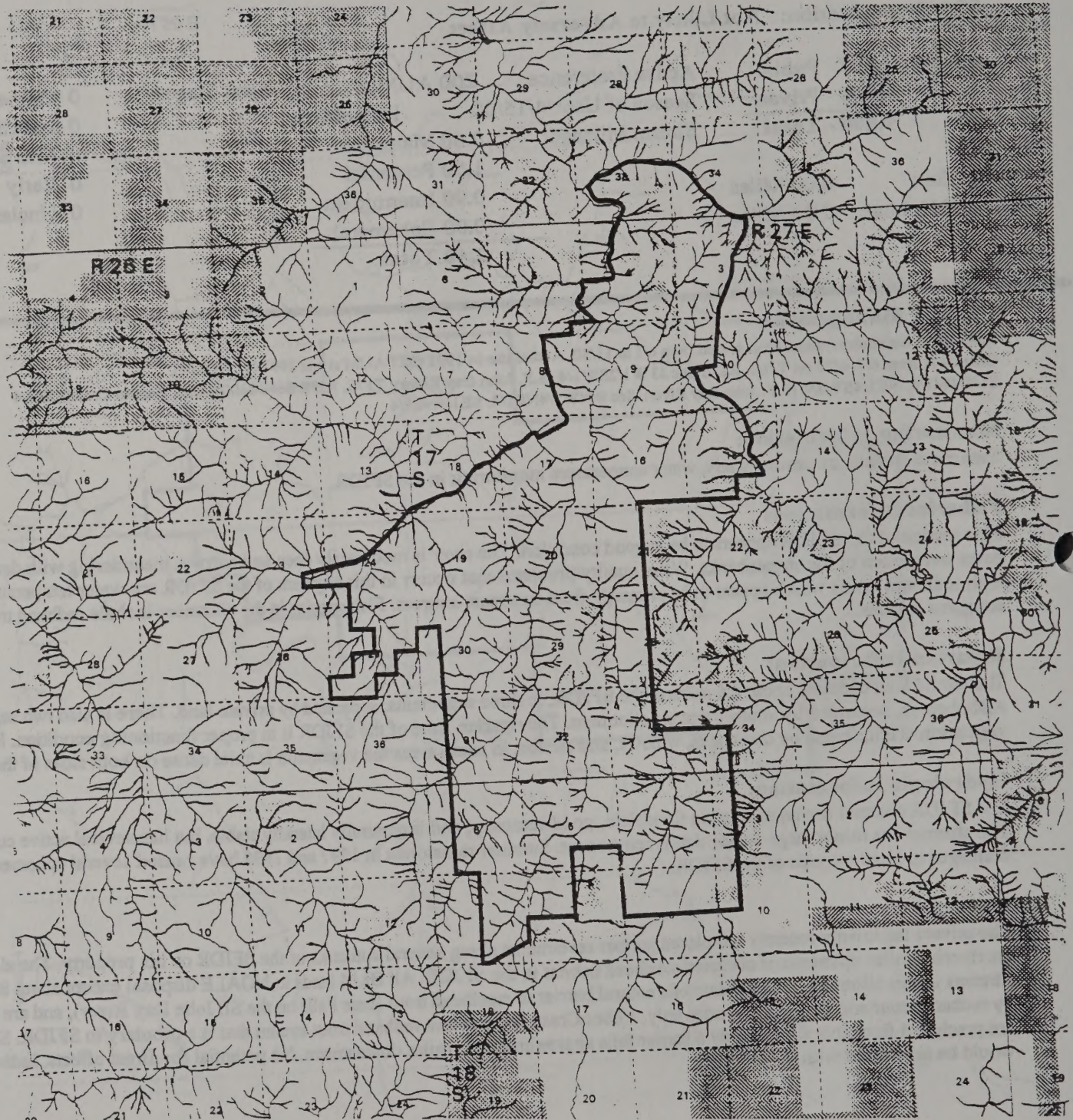
Hydrologic Information:

The SFJDR channel has an accessible floodplain, good sinuosity, and is generally laterally stable, but has several active cutbanks. The channel has minor large woody debris component. Summer rainstorms in 1997 and 1998 have caused several ephemeral drainages to blow out east of the SFJDR.

Discussion:

The private landowner recently has placed juniper revetments along several cutbanks of the SFJDR on his property. The allotment is six riverine miles upstream of occupied steelhead habitat in the SFJDR. All BLM lands in NOALE disposal except about 840 acres. Streams in this allotment are upstream of a natural barrier to steelhead trout (Izee Falls on the SF John Day River), and are occupied by redband trout and non-game species only. Abbot Creek is a resident redband trout stream that is a tributary to SFJDR. Steelhead are precluded from this allotment by a barrier falls approximately 6 miles downstream. No potential for direct effects. Indirect effects would be associated with water quality.

Big Flats Allotment #04186



Land Ownership
 BLM Land
 USFS Land
 CTWS Land
 National Park
 State Land



Appendix D

Redd Trampling Potential Analysis by Allotment

What follows is a discussion of a model derived using observations made in Ballard 1999, to describe the potential for redd trampling via livestock. A model is an attempt to describe a real world situation using mathematical relationships. The purpose of this model is to describe the relative potential of redd trampling to occur. With every mathematical model attempting to describe the real world assumptions are made with regard to the model, and the model is only as good as the assumptions allow. Various assumptions were made with regard to this model, they are:

1. There is a relationship with regard to redd trampling between the number of redds within an allotment of pasture and the stocking rate (i.e. the number of cattle on the allotment for a certain duration of time).
2. The number of redd impacts increases with redd density or stocking rate on the allotment (i.e. for stocking rates that remain the same, if redd density increases the number of impacts to redds increases, and for redd densities that remain the same, if stocking rate increases the number of impacts to redds increases).
3. The relationship between redd trampling, stocking rate and redd density is a linear relationship.
4. All steelhead habitat as noted on each allotment is spawning habitat and is fully seeded at the management goal of 5.6 redds/mile.
5. Livestock are evenly distributed over the entire acreage of the allotment.
6. Redds are evenly distributed along the entire noted habitat area within the allotment.
7. Hydrologic, vegetative and weather conditions are the same during chinook spawning times in late August along Catherine Creek, as during steelhead spawning times in early spring in the John Day Basin.
8. Livestock behavior in late August in the Catherine Creek pasture is the same as livestock behavior in the John Day Basin during early spring.
9. An impact to a redd is the occurrence of one livestock step or hoof inside the boundaries of the redd and represents total destruction of a redd, eliminating the viability of any eggs within that redd.
10. Conditions on the allotments remain the same each year.

Initially the study conducted by Ballard was done in a 41 ha pasture at a stocking rate of 0.82 aums/ha. Spawning densities were 4.6 redds/km and 6.1 redds/km for the years studied. Within the pasture is 2.6 km of stream 1.3 km of which is excluded from cattle grazing, leaving only 1.3 km open to cattle entry.

The critical impacts of livestock on redds is a density issue involving the number of legs present to trample. In the Ballard study 1 aum was equivalent to 8 legs (cow/calf pair). (Typically BLM aum conversions are 1 aum is equivalent to 8 legs (cow/calf pair) as well).

The analysis leads to two major density factors - Leg Days per acre (LD/a) and Redds per acre (R/a)

Observed values:	Aum's	50 aums
	Duration	28 days
	Acres	101.311 acres
	Redd Density	4.6 redds/mile
	Miles of Stream	1.3 miles

LD/a is calculated as $-(\text{aums} * 8 \text{ legs/aum} * 28 \text{ days})/\text{acres}$ which is

$$\begin{aligned} & (50 \text{ aums} * 8 \text{ legs/aum} * 28 \text{ days})/101.311 \text{ acres} \\ & = 110.55 \text{ LD/a} \end{aligned}$$

R/a is calculated as $-(\text{Redds/km} * \# \text{ km})/\text{acres}$ which for this study is

$$\begin{aligned} & (4.6 \text{ redds/km} * 1.3 \text{ km})/101.311 \text{ acres} \\ & = 0.059 \text{ R/a} \end{aligned}$$

The number of impacts per grazing season or per year is calculated by -

$$\text{Number of Impacts} = \text{LD/a} * \text{R/a} * \text{coefficient}$$

In this case we know the number of impacts and can solve for the coefficient that can then be used to extrapolate this study to other areas. The number of impacts for this study was 2 times in 2 years so —

$$2 \text{ Impacts} = 110.55 \text{ LD/a} * 0.059 \text{ R/a} * \text{coefficient}$$

Solving for the coefficient leaves ---- coefficient = $0.307 \text{ Impacts acres}^2/\text{LDR}$

This impact coefficient can then be applied to any allotment for which the parameters of stocking rate, acres, stream miles, spawning density and duration of use is known, and for which the above assumptions are applied. For the purposes of this analysis, regardless of the actual season of use, a duration was assumed of 30 days. On any given year the Aum's allotted to each allotment can be grazed once, so for example in an allotment with 50 Aum's available a stocking rate of 50 cow/calf pairs can graze for 30 days, or 25 cow/calf pairs can graze for 60 days. For the purpose of this analysis this does not change the factor of Leg Days per acre, so a 30 day grazing period was assumed. The spawning density was taken to be 5.6 redds/mile, which is the spawning density goal which the Oregon Department of Fish and Wildlife has set for the John Day basin for areas that support spawning. For each BLM allotment the factors of percent trampled and occurrence rate were calculated, an example of the math follows. For each value see subsequent tables.

For Example:

Rockpile Allotment # 4103

Factors:

Aum's -	928 aums
BLM Acres	4918 acres
Stream Miles	7.6 miles
Spawning Density	5.6 redds/mile
Duration	30 days

$$LD/a = (928 \text{ aums} * 8 \text{ legs/aum} * 30 \text{ days}) / 4918 \text{ acres}$$

$$LD/a = 45.2867 \text{ LD/a}$$

$$R/a = (7.6 \text{ miles} * 5.6 \text{ redds/mile}) / 4918 \text{ acres}$$

$$R/a = 0.008654 \text{ R/a}$$

$$\text{Impacts} = 0.307 \text{ Impacts acre}^{-2} / \text{LDR} * 45.2867 \text{ LD/a} * 0.008654 \text{ R/a}$$

$$\text{Impacts} = 0.1203 \text{ impacts}$$

$$\text{Number of Redds} = 7.6 \text{ miles} * 5.6 \text{ redds/mile}$$

$$\text{Number of Redds} = 42.56 \text{ redds}$$

$$\text{Percent of Redds Trampled} = (0.1203 \text{ impacts on redds} / 42.56 \text{ redds}) * 100$$

$$\text{Percent of Redds Trampled} = 0.28269 \% \text{ of redds trampled}$$

The occurrence rate is calculated by -

$$\text{Occurrence} = 1 / \text{Impacts}$$

$$\text{Occurrence} = 1 / 0.1203 \text{ impacts}$$

$$\text{Occurrence} = 8.31 \text{ years per impact in other words - on average on this allotment we can expect that at least once every 8.31 years a redd will be trampled by livestock}$$

As depicted this model to describes mathematically the relative occurrence of redd trampling on an allotment. Certain assumptions as set forth in the premise are obviously not accurate. however, need to be made in order to compare values. The utility of this analysis lies not in the actual number calculated but in that numbers relation to other allotments in depicting areas and their relative likelihood for redd trampling to occur. This model takes a study that attempted to measure the impacts of redd trampling, outside of this study very little quantification has been made with regard to this issue. Professional judgement and empirical observations will remain the basis of decisions made regarding this issue. This analysis was made in order to offer a mathematical perspective based on actual quantified observations. The table that follows uses the calculated values to rank the relative probability and potential for redd trampling to occur on the BLM allotments discussed in this Biological Assessment. Taken in relationship what the table says for example is that it is more than 5 times less likely for redd trampling to occur on the Umatilla allotment # 4125 than on the West Bologna Creek allotment # 4093.

Allotment

Percent of Redds

Occurrence

Trampled

Once Every # of Year

4093	WEST BOLOGNA CREEK	13.82 %	2.15
4056	POINTER	12.24 %	2.43
4115	CANYON MTN.	14.74 %	3.03
4028	NEAL BUTTE	1.73 %	3.23
4083	19 20	7.48 %	3.98
4029	NORTH FORK	0.65 %	4.79
4046	THREE MILE	9.21 %	4.85
4042	JOHNNY CAKE MTN.	2.82 %	5.28
2563	HORSESHOE CREEK	0.64 %	5.47
4012	RIVER	5.26 %	5.66
4108	LITTLE WALL CREEK	3.81 %	6.69
4135	GIBSON CREEK	10.23 %	6.98
4014	MIDDLE FORK	1.80 %	8.29
4103	ROCKPILE	0.28 %	8.31
2593	VERNE A. MOBLEY	0.64 %	9.34
4022	LONG HOLLOW	9.21 %	9.69
4016	DIXIE	0.36 %	10.72
4125	UMATILLA	1.81 %	10.99
2559	FOPIANO	2.63 %	11.31
4003	SLICKEAR MT.	0.37 %	12.73
4176	DICK CREEK	1.67 %	13.35
2561	GIRDS CREEK	1.30 %	13.69
4045	BEAR GULCH	12.11 %	14.75
2639	TUBB CREEK	2.00 %	14.87
4060	BAKER CITY	1.44 %	15.51
4099	INDIAN	2.56 %	17.45
2623	STEIWER RANCHES	0.16 %	18.54
2547	SIXMILE	0.31 %	18.95
4047	LITTLE INDIAN	4.61 %	19.39
2625	DAVID M. STIREWALT	0.27 %	19.69
4122	BIG BEND	1.80 %	19.85
2560	BASELINE	0.62 %	23.11
4015	MUD SPRINGS	3.84 %	23.27
4136	BALDWIN GULCH	3.81 %	23.41
4035	RIM	0.71 %	25.28
4156	RUDIO CREEK	0.50 %	25.42
2609	CROWN ROCK	0.35 %	25.47
4050	JINKS CREEK	2.12 %	28.06
2556	MURRAY HOWARD	0.29 %	30.77
2645	CLARK	0.47 %	31.93
4001	JOHNNY CREEK	1.34 %	33.43
4163	CREEK	0.75 %	33.84
2551	CLINTON O. HARRIS	0.54 %	41.29
2660	RATTLESNAKE CREEK	1.03 %	43.18
2516	GABLE CREEK	0.06 %	45.05

Allotment

Percent of Redds

Occurrence

Trampled

Once Every # of Year

2565	LEROY A. BRITT	1.31 %	45.57
2518	PINE CREEK	0.09 %	45.70
4077	MOON MOUNTAIN	3.84 %	46.54
2626	HARPER MOUNTAIN	0.29 %	47.82
2509	BELSHE	0.13 %	48.12
4071	ROUND TOP	1.14 %	52.35
2535	HAYFIELD	0.68 %	52.45
2629	TATUM	0.10 %	59.67
2607	PRYOR FARMS	0.58 %	62.04
2532	TOM COLE	0.28 %	63.37
4009	BIRCH CREEK	0.27 %	66.14
2608	RATTRAY	0.03 %	66.98
4151	KINZUA	0.10 %	69.13
4112	COTTONWOOD FORKS	0.59 %	75.80
2577	BYRDS POINT	0.31 %	76.85
4041	FRANKS CREEK	0.24 %	82.70
2544	CIRCLE S RANCH	0.25 %	96.34
2558	SQUAW CREEK	0.09 %	99.19
2613	FRANK R. ROBINSON	0.74 %	121.18
4020	MURDERERS CREEK	0.02 %	122.37
4129	BELSHAW CREEK	1.44 %	124.43
2631	DIPPING VAT	0.14 %	130.43
4145	TWO COUNTY	0.04 %	134.70
2584	CATHERINE MAURER	0.02 %	141.90
4076	COTTONWOOD CREEK	0.16 %	143.93
4052	BIG BALDY	0.03 %	148.70
2598	HAY CREEK	0.12 %	150.94
2520	SMITH POINT	0.04 %	151.24
2512	BIG MUDDY	0.02 %	166.36
2554	CHARLES H. HILL	0.19 %	189.79
4124	SMOKEY CREEK	0.46 %	193.35
2662	JOHNSON CREEK	0.05 %	205.89
4085	BARBER POLE BUTTE	0.66 %	271.44
2541	EAKIN	0.03 %	312.79
2523	KAHLER CREEK	0.87 %	409.50
2533	SUTTON MOUNTAIN	0.01 %	423.55
2611	VAN RIETMANN	0.40 %	448.03
2531	CIRCLE BAR	0.01 %	455.37
2642	LILLIAN C. MASCALL	0.11 %	848.90
2545	CHERRY CREEK	0.03 %	1,364.26

Appendix E

Subpart 4140-Prohibited Acts

Sec. 4140.1 Acts prohibited on public lands.

The following acts are prohibited on public lands and other lands administered by the Bureau of Land Management:

(a) Grazing permittees or lessees performing the following prohibited acts may be subject to civil penalties under Sec. 4170.1:

- (1) Violating special terms and conditions incorporated in permits or lease,
- (2) Failing to make substantial grazing use as authorized for 2 consecutive fee years, but not including approved temporary nonuse, conservation use, or use temporarily suspended by the authorized officer,
- (3) Placing supplemental food on these lands without authorization.
- (4) Failing to comply with the terms, conditions, and stipulations of range improvement cooperative agreements or range improvement permits;
- (5) Refusing to install, maintain, modify, or remove range improvements when so directed by the authorized officer.
- (6) Unauthorized leasing or subleasing as defined in this part.

(b) Persons performing the following prohibited acts related to rangelands to civil and criminal penalties set forth at §§ 4170.1 and 4170.2:

- (1) Allowing livestock or other privately owned or controlled animals to graze on or be driven across these lands:
 - (i) Without a permit or lease, and annual grazing authorization. For the purposes of this paragraph, grazing bills for which payment has not been received do not constitute grazing authorization.
 - (ii) In violation of the terms and conditions of a permit, lease, or other grazing use authorization including, but not limited to, livestock in excess of the number authorized;
 - (iii) In an area or at a time different from that authorized; or
 - (iv) Failing to comply with a requirement under Sec. 4130.5(c) of this title.
- (2) Installing, using, maintaining, modifying, and/or removing range improvements without authorization:
- (3) Cutting, burning, spraying, destroying, or removing vegetation without authorization;
- (4) Damaging or removing U.S. property without authorization;
- (5) Molesting, harassing, injuring, poisoning, or causing death of livestock authorized to graze on these lands and removing authorized livestock without the owner's consent;
- (6) Littering;
- (7) Interfering with lawful uses or users including obstructing free transit through or over public lands by force, threat, intimidation, signs, barrier or locked gates;
- (8) Knowingly or willfully making a false statement or representation in base property certifications, grazing applications, range improvement permit applications, cooperative agreements, actual use reports and/or amendments thereto;

(9) Failing to pay any fee required by the authorized officer pursuant to this part. or making payment for grazing use of public lands with insufficiently funded checks on a repeated and willful basis:

(10) Failing to reclaim and repair any lands, property, or resources when required by the authorized officer:

(11) Failing to reclose any gate or other entry during periods of livestock use.

(c) Performance of an act listed in paragraphs (c)(1), (c)(2) or (c)(3) at this section where Public land administered by the Bureau of Land Management is involved or affected, the violation is related to grazing use authorized by a permit or lease issued by the Bureau of Land Management, and the permittee or lessee has been convicted or otherwise found to be in violation of any of these laws or regulations by a court or by final determination of an agency charged with the administration of these laws or regulations, and no further appeals are outstanding, constitutes a prohibited act that may be subject to the civil penalties set forth at § 4170.1-1.

(1) violation of Federal or State laws or regulations pertaining to the:

(i) placement of poisonous bait or hazardous devices designed for the destruction of wildlife:

(ii) application or storage of pesticides, herbicides, or other hazardous materials:

(iii) alteration or destruction of natural stream courses without authorization.

(iv) pollution of water sources;

(v) illegal take, destruction or harassment, or aiding and abetting in the illegal take, destruction or harassment of fish and wildlife resources: and

(vi) illegal removal or destruction of archeological or cultural resources;

(2) violation of the Bald Eagle Protection Act (16 U.S.C. 668 et. seq.), Endangered Species Act (16 U.S.C. 1531 et. seq. or any provision of part 4700 of this title concerning the protection and management of wild free-roaming horses and burros: or

(3) violation of State live-stock laws or regulations relating to the branding of livestock: breed, grade, and number of bulls; health and sanitation requirements, and violating State, county, or local laws regarding the stray of livestock from permitted public land grazing areas onto areas that have been formally closed to open range grazing.

Subpart 4150-Unauthorized Grazing Use

Sec. 4150.1 Violations.

Violation of Sec. 4140.1 (b)(1) constitutes unauthorized grazing use.

(a) The authorized officer shall determine whether a violation is nonwillful, willful, or repeated willful.

(b) Violators shall be liable in damages to the United States for the forage consumed by their livestock, for injury to Federal property caused by their unauthorized grazing use, and for expenses incurred in impoundment and disposal of their livestock, and may be subject to civil penalties or criminal sanction for such unlawful acts.

Sec. 41 50.2 Notice and order to remove.

- (a) Whenever it appears that a violation exists and the owner of the unauthorized livestock is known, written notice of unauthorized use and order to remove livestock by a specified date shall be served upon the alleged violator or the agent of record, or both, by certified mail or personal delivery. The written notice shall also allow a specified time from receipt of notice for the alleged violator to show that there has been no violation or to make settlement under Sec. 4150.3.
- (b) Whenever a violation has been determined to be nonwillful and incidental, the authorized officer shall notify the alleged violator that the violation must be corrected, and how it can be settled, based upon the discretion of the authorized officer.
- (c) When neither the owner of the unauthorized livestock nor his agent is known, the authorized officer may proceed to impound the livestock under Sec. 4150.4.
- (d) The authorized officer may temporarily close areas to grazing by specified kinds or class of livestock for a period not to exceed 12 months when necessary to abate unauthorized grazing use. Such notices of closure may be issued as final decisions effective upon issuance or on the date specified in the decision and shall remain in effect pending the decision on appeal unless a stay is granted by the Office of Hearings and Appeals in accordance with 43 CFR 4.21.

Sec. 4150.3 Settlement.

The amount due for settlement shall include the value of forage consumed as determined in accordance with paragraph (a), (b), or (c) of this section. Where violations are repeated willful, the authorized officer shall take action under Sec. 4170. 1 -1 (b) of this title. The amount due for all settlements shall include the value of forage consumed as determined by paragraph (a), (b), or (c) of this section. Settlement for willful and repeated willful violations shall also include the full value for all damages to the public lands and other property of the United States; and oil reasonable expenses incurred by the United States in detecting, investigating, resolving violations, and livestock impoundment costs.

(a) For nonwillful violations: The value of forage consumed as determined by the average monthly rate per AUM for pasturing livestock on privately owned land (excluding irrigated land) in each State as published annually by the Department of Agriculture. The authorized officer may approve nonmonetary settlement of unauthorized use only when the authorized officer determines that each of the following conditions is satisfied:

- (1) evidence shows that the unauthorized use occurred through no fault of the livestock operator;
- (2) the forage use is insignificant;
- (3) the public lands have not been damaged; and
- (4) nonmonetary settlement is in the best interest of the United States.

(b) For willful violations: Twice the value of forage consumed as determined in paragraph (a) of this section.

(c) For repeated willful violations: Three times the value of the forage consumed as determined in paragraph (a) of this section.

(d) Payment made under this section does not relieve the alleged violator of any criminal liability under Federal or State law.

(e) Violators shall not be authorized to make grazing use on the public lands administered by the Bureau of Land Management until any amount found to be due the United States under this

section has been paid. The authorized officer may take action under Sec. 4180. 1-2 of this title to cancel or suspend-grazing authorizations or to deny approval of applications for grazing use until such amounts have been paid. The proposed decision shall include a demand for payment.

Sec. 4150.4 Impoundment and disposal.

Unauthorized livestock remaining on the public lands or other lands under Bureau of Land Management control, or both, after the date set forth in the notice and order to remove sent under Sec. 4150.2 may be impounded and disposed of by the authorized officer as provided herein.

Sec. 4150.4-1 Notice of intent to impound.

(a) A written notice of intent to impound shall be sent by certified mail or personally delivered to the owner or his agent, or both. The written notice shall indicate that unauthorized livestock on the specified public lands or other lands under Bureau of Land Management control, or both, may be impounded any time after 5 days from delivery of the notice.

(b) Where the owner and his agent are unknown, or where both a known owner and his agent refuses to accept delivery, a notice of intent to impound shall be published in a local newspaper and posted at the county courthouse and a post office near the public land involved. The notice shall indicate that unauthorized livestock on the specified public lands or other lands under, Bureau of Land Management control, or both, may be impounded any time after 5 days from publishing and posting the notice.

Sec. 4150.4-2 Impoundment.

After 5 days from delivery of the notice under Sec. 4150.4-1 (a) of this title or any time after 5 days from publishing and posting the notice under Sec. 4150.4-1 (b) of this title, unauthorized livestock may be impounded without further notice any time within the 12-month period following the effective date of the notice.

Sec. 4150.4-3 Notice of public sale.

Following the impoundment of livestock under this subpart the livestock may be disposed of by the authorized officer under these regulations or, if a suitable agreement is in effect, they may be turned over to the State for disposal. Any known owners or agents, or both, shall be notified in writing by certified mail or by personal delivery of the sale and the procedure by which the impounded livestock may be redeemed prior to the sale.

Sec. 4150.4-4 Redemption.

Any owner or his agent, or both, or lien-holder of record of the impounded livestock may redeem them under these regulations or, if a suitable agreement is in effect, in accordance with State law.

prior to the time of sale upon settlement with the United States under Sec. 4150.3 or adequate showing that there has been no violation.

Sec. 4150.4-5 Sale.

If the livestock are not redeemed on or before the date and time fixed for their sale, they shall be offered at public sale to the highest bidder by the authorized officer under these regulations or, if a suitable agreement is in effect, by the State. If a satisfactory bid is not received, the livestock may be reoffered for sale, condemned and destroyed or otherwise disposed of under these regulations, or if a suitable agreement is in effect, in accordance with State Law.

Subpart 4160-Administrative Remedies

Sec. 4160.1 Proposed decisions.

(a) Proposed decisions shall be served on any affected applicant, permittee or lessee, and any agent and lien holder of record, who is affected by the proposed actions, terms or conditions, or modifications relating to applications, permits and agreements (including range improvement permits) or losses, by certified mail or personal delivery. Copies of proposed decisions shall also be sent to the interested public.

(b) Proposed decisions shall state the reasons for the action and shall reference the pertinent terms, conditions and the provisions of applicable regulations. As appropriate, decisions shall state the alleged violations of specific terms and conditions and provisions of these regulations alleged to have been violated, and shall state the amount due under §§ 4130.8 and 4150.3 and the action to be taken under § 4170.1.

(c) The authorized officer may elect not to issue a proposed decision prior to a final decision where the authorized officer has made a determination in accordance with § 4110.3-3(b) or § 4150.2(d) of this part.

Sec. 4160.2 Protests.

Any applicant, permittee, lessee or other affected interests may protest the proposed decision under Sec. 4160.1 of this title in person or in writing to the authorized officer within 15 days after receipt of such decision.

Sec. 4160.3 Final decisions.

(a) In the absence of a protest, the proposed decision will become the final decision of the authorized officer without further notice unless otherwise provided in the proposed decision.

(b) Upon the timely filing of a protest, the authorized officer shall reconsider his proposed decision in light of the protestant's statement of reasons for protest and in light of other information pertinent to the case. At the conclusion to his review of the protest the authorized officer shall serve his final decision on the protestant or his agent, or both, and the interested

public.

(c) A period at 30 days following receipt of the final decision, or 30 days after the date the proposed decision becomes final as provided in paragraph (a) of this section, is provided for filing an appeal and petition for stay of the decision pending final determination an appeal. A decision will not be effective during the 30-day appeal period, except as provided in paragraph (f) of this section. See §§ 4.21 and 4.470 of this title for general provisions of the appeal and stay process.

(d) When the Office of Hearings and Appeals stays a final decision of the authorized officer regarding an application for grazing authorization, an applicant who was granted grazing use in the preceding year may continue at that level of authorized grazing use during the time the decision is stayed, except where grazing use in the preceding year was authorized on a temporary basis under §§ 4110.3-1 (a). Where an applicant had no authorized grazing use during the previous year, or the application is for designated ephemeral or annual rangeland grazing use, the authorized grazing use shall be consistent with the decision pending the Office of Hearings and Appeals final determination on the appeal.

(a) When the Office of Hearings and Appeals stays a final decision of the authorized officer to change the authorized grazing use, the grazing use authorized to the permittee or losses during the time that the decision is stayed shall not exceed the permittee's or lessee's authorized use in the last year during which any use was authorized.

(f) Notwithstanding the provisions of § 4.21 (a) of this title, the authorized officer may provide that the final decision shall be effective upon issuance or on a date established in the decision and shall remain in effect pending the decision on appeal unless a stay is granted by the Office of Hearings and Appeals when the authorized officer has made a determination in accordance with § 4110.3-3(b) or § 4150.2(d) of this part. Nothing in this section shall affect the authority of the Director of the Office of Hearings and Appeals or the Interior Board of Land Appeals to place decisions in full force and affect as provided in § 4.21 (a)(1) of this title.

Sec. 4160.4 Appeals.

Any person whose interest is adversely affected by a final decision of the authorized officer may appeal the decision for the purpose of a hearing before an administrative law judge by following the requirements set out in § 4.470 of this title. As stated in that part, the decision must be filed within 30 days after the receipt of the decision or within 30 days after the date the proposed decision becomes final as provided in 4160.3(a). Appeals and petitions for a stay of the decision shall be filed at the office of the authorized officer. The authorized Officer shall promptly transmit the appeal and petition for stay to ensure their timely arrival at the appropriate Office of Hearings and Appeals.

Subpart 4170-Penalties

Sec. 4170.1 Civil penalties.

Sec. 4170. 1 -1 Penalty for violations.

(a) The authorized officer may withhold issuance of a grazing permit or lease, or suspend the grazing use authorized under a grazing permit or lease, in whole or in part, or cancel a grazing permit or lease and grazing preference, or a free use grazing permit or other grazing authorization, in whole or in part, under Subpart 4160 of this title, for violation by a permittee or lessee of any of the provisions of this part.

(b) The authorized officer shall suspend the grazing use authorized under a grazing permit, in whole or in part, or shall cancel a grazing permit or lease and grazing preference, in whole or in part, under Subpart 4160 of this title for repeated willful violation by a permittee or losses of Sec. 4140.1 (b)(1) of this title.

(c) Whenever a nonpermittee or nonlessee violates Sec. 4140.1(b) of this title and has not made satisfactory settlement under Sec. 4150.3 of this title the authorized officer shall refer the matter to proper authorities for appropriate legal action by the United States against the violator.

(d) Any person who is found to have violated the provisions of Sec. 4140.1 (a)(6) after August 21, 1995, shall be required to pay twice the value of forage consumed as determined by the average monthly rate per AUM for pasturing livestock on privately owned land (excluding irrigated land) in each State as supplied annually by the National Agricultural Statistics Service, and all reasonable expenses incurred by the United States in detecting, investigating, and resolving violations. If the dollar equivalent value is not received by the authorized officer within 30 days of receipt of the final decision, the grazing permit or lease shall be cancelled. Such payment shall be in addition to any other penalties the authorized officer may impose under paragraph (a) of this section.

Sec. 4170.1 -2 Failure to use.

If a permittee or lessee has, for 2 consecutive grazing fee years, failed to make substantial use as authorized in the lease or permit, or has failed to maintain or use water bass property in the grazing operation, the authorized officer, after consultation, coordination and cooperation with the permittee or losses and any lienholder of record, may cancel whatever amount of permitted use the permittee or lessee has failed to use.

Sec. 4170.2 Penal provisions.

Sec. 4170.2-1 Penal provisions under the Taylor Grazing Act.

Under section 2 of the Act any person who willfully commits an act prohibited under § 4140.1 (b), or who willfully violates approved special rules and regulations is punishable by a fine of not more than \$500

Sec. 4170.2-2 Penal provisions under the Federal Land Policy and Management Act.

Under section 303(a) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.), any person who knowingly and willfully commits an act prohibited under § 4140.1 (b) or who knowingly and willfully violates approved special rules and regulations may be brought

before a designated U.S. magistrate and is punishable by a fine in accordance with the applicable provisions of Title 18 of the United States Code, or imprisonment for no more than 12 months or both.